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Bibliography On Highway Safety

Miscellaneous Publication No. 296

Compiled by Mildred A. Wilson

Junior Librarian, Division of Information Bureau of Public Roads



UNITED STATES DEPARTMENT OF AGRICULTURE

Washington, D. C.



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BIBLIOGRAPHY ON HIGHWAY SAFETY

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INTRODUCTION

This bibliography is selective in character and includes references to books, articles printed in technical and other periodicals, and publications of societies. It covers the period from 1928 through May 1937. Traffic conditions changed considerably during this period, and material published prior to 1928 is now chiefly of historical value only.

References to earlier publications are given in the Annotated Index to Articles on Highway Safety and Allied Subjects, which includes references to material printed during the years 1923 through 1927. This index was prepared for the committee on causes and prevention of highway accidents of the Highway Research Board by the library staff of the Bureau of Public Roads. Copies of this mimeographed index are no longer available for distribution but will be found in many libraries. Other bibliographies that include references to earlier material have been noted.

An attempt has been made to separate publications dealing with the causes of accidents from those dealing with the prevention of accidents. Since numerous articles deal with both cause and prevention, classification has been difficult, and each article has been classified according to the subject emphasized most.

Although some references could be placed under two or more headings with equal justification, they have been so arranged that special emphasis is given to the various phases of the safety problem. For example, Motor Vehicle Inspection is placed under Traffic Control and Regulation, whereas it might have been placed under Accident Prevention.

References in the bibliography have not been cross indexed.

Each reference is designated by a citation number appearing at the right side of the page. An author index is given on page 131. The number following the author's name is the citation number in-dicating the place of the reference in the bibliography. Abbreviations used are those listed in United States Department of Agriculture Bulletin 1330, Abbreviations Employed in Experiment Station Record for Titles of Periodicals.

BIBLIOGRAPHIES

AMERICAN ELECTRIC RAILWAY ASSOCIATION.

BIBLIOGRAPHY ON STREET AND HIGHWAY TRAFFIC. 85 pp. New York. 1931. [Mimeographed.] (Amer. Elect. Ry. Assoc. Bull. 355.)

Revised edition of Bulletin 305, issued April 1, 1930. Contains a complex index of the association's library on street traffic literature, including traffic surveys, general publications, and periodical references.

First annual supplement issued April 1, 1932. 29 pp. [Mimeographed.] HARVARD UNIVERSITY, ALBERT RUSSEL ERSKINE BUREAU FOR STREET TRAFFIC

RESEARCH. (2)

A BIBLIOGRAPHY ON DRIVING SAFETY. Prepared under the direction of Dr. Harry R. DeSilva, Harvard Bureau for Street Traffic Research, as a part of a project on Research on Driving Skill, Mass. W. P. A. Project 12259. 157 pp. [Cambridge, Mass. 1937.] [Mimeographed.]

STREET TRAFFIC BIBLIOGRAPHY; A SELECTED AND ANNOTATED BIBLIOGRAPHY OF THE LITERATURE OF STREET TRAFFIC CONTROL AND RELATED SUBJECTS, 1920-1933. 223 numb. 1. Cambridge, Mass. 1933. [Mimeographed.] Accidents and accident prevention, pp. 23-54.

INSTITUTE OF TRAFFIC ENGINEERS.

TRAFFIC DIGEST. New York.

An annotated list of the important current literature on street and highway traffic, published monthly by the institute.

NATIONAL RESEARCH COUNCIL, DIVISION OF ENGINEERING AND INDUSTRIAL RE-SEARCH, HIGHWAY RESEARCH BOARD, COMMITTEE ON CAUSES AND PREVENTION OF HIGHWAY ACCIDENTS. (5)

BIBLIOGRAPHY, STREET AND HIGHWAY SAFETY. [Prepared . . . by the Staff of the Library of the Bureau of Public Roads] 388 pp. Washington, D. C. [1928.] [Mimeographed.]

An annotated index to articles on highway safety and allied subjects, 1923-27.

UNITED RAILWAYS & ELECTRIC CO., TRAFFIC DEPARTMENT. (6)

BIRLIOGRAPHY OF PUBLICATIONS RELATING TO VEHICULAR TRAFFIC AND TRAFFIC CONTROL. 29 pp. Baltimore. 1928. [Mimeographed.]

ACCIDENTS AND ACCIDENT PREVENTION

GENERAL DISCUSSIONS

AMERICAN ASSOCIATION OF MOTOR VEHICLE ADMINISTRATORS.

PROCEEDINGS. 1-4. 1933-36. Washington, D. C.

Committees on accident research and prevention, administration and enforcement, reciprocity and taxation, uniform motor vehicle code, and uniform system of registration practices.

A News Bulletin is issued monthly by the association in the interest of traffic administration and the reduction of traffic accidents.

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CANNING, W. S.

A STUDY OF THE TRAFFIC PROBLEM. 32 pp., illus. [Philadelphia], Keystone Automobile Club. c1928.

Traffic survey; pedestrians; truck and freight movement; development of traffic regulation and control; survey for traffic signal system; systems of control.

FURNAS, J. C., and SMITH, E. N.

SUDDEN DEATH AND HOW TO AVOID IT. 58 pp., illus. New York, Simon & Schuster, 1935.

Describes brutal horrors of accidents, and the victims permanently injured, and gives an analysis of causes and possible cures of accidents.

HARRISON, H. H.

SAFETY ON THE HIGHWAYS. Miss. Valley Conf. State Highway Depts. [Proc.] 28: 102-106. 1936.

Review of some of the accomplishments realized in Illinois.

HOLMSTROM, J. E.

RAILWAYS AND ROADS IN PIONEER DEVELOPMENT OVERSEAS: A STUDY OF THEIR COMPARATIVE ECONOMICS. 304 pp., illus. London, P. S. King & Son, Ltd. 1934.

Accidents, pp. 277-280. Gives a comparison between railroads and motor carriers.

MULLIGAN, BARRY.

COLLISIONS IN STREET AND HIGHWAY TRANSPORTATION. 310 pp., illus. Philadelphia, Dorrance & Co., Inc. c1936.

The material is concerned mainly with street layout and signal systems as means of preventing collisions.

NATIONAL CONFERENCE ON STREET AND HIGHWAY SAFETY.

[REPORTS.] Washington, D. C.

The National Conference on Street and Highway Safety was organized in 1924 by Hon. Herbert Hoover, then Secretary of Commerce, to reduce the heavy toll of accidents in our streets and highways. Its work has developed through committee studies and general conferences, held in December 1924, March 1926, May 1930, and May 1934. The reports issued by the conference held in 1934 are as follows: (1) Guides to traffic safety; (2) summary of proceedings; (3) model traffic ordinances; (4) uniform vehicle code. (5 pts). vehicle code.

The reports issued by the conference held in 1930 are: (1) Ways and Means to Traffic Safety-A Summary of all Recommendations of the National Conference on Street and Highway Safety, Including the Final Report and Resolutions Adopted at the Third National Conference, May **Traffic Statistics**, Protection of Railway Grade Crossings and Highway Intersections, Maintenance of the Motor Vehicle, Measures for the Relief of Traffic Congestion, Uniform Traffic Regulation; (4) Uniform Vehicle Code; (5) Model Municipal Traffic Ordinance; and (6) Manual on Street Traffic Signs, Signals and Markings. Similar committee reports were issued in 1924 and 1926.

NATIONAL SAFETY CONGRESS. STREET AND HIGHWAY TRAFFIC, VEHICLE FLEET, CHILD EDUCATION AND HOME SAFETY SESSIONS. (14) TRANSACTIONS, 21-25. 1932-36. Chicago, National Safety Council, Inc.

c1933-36.

"The Transactions are published as a condensed record of the proceedings at the National Congress."-Trans. 25:2. 1936.

Discusses public education, accident records, traffic engineering, enforce-ment and police activities, rural highway hazards, pedestrian safety contests, and headlighting.

NATIONAL SAFETY COUNCIL, INC.

ENGINEERING FOR TRAFFIC SAFETY. 32 pp. Chicago. 1937.

Discusses traffic planning, control, signs and signals, parking, traffic engineers, and safer highways and cars.

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PAGE V W.

PREVENTION OF AUTOMOBILE ACCIDENTS, SAFE DRIVING ASSURED: A GUIDE TO EXPERT DRIVING, CONTAINING NUMEROUS SUGGESTIONS FOR SAFE AND SANE OPERATION OF AUTOMOBILES ON OUR HIGHWAYS. INCLUDES INSTRUCTIONS FOR INSPECTION AND ADJUSTMENT OF CAR MECHANISM TO PREVENT LOSS OF CONTROL AND RESULTING PERSONAL DAMAGE AND PROPERTY DAMAGE 172 DD., illus. New York, N. W. Henley Pub. Co. 1932.

SHERMAN, R. W.

IF YOU'RE GOING TO DRIVE FAST. 149 pp. New York, T. Y. Crowell Co. c1935. Solution of safety problem is in making driving something to be proud of. Reckless driver should be punished. Describes how to drive safely at any speed.

SPIELMANN, P. E., and ELFORD, E. J.

ROAD MAKING AND ADMINISTRATION. 441 pp., illus. London, Edward Arnold & Co. 1934.

Safety, pp. 24-44. Discusses the following topics: Road construction: street refuges and guard posts (bollards); street lighting; super-elevation and camber; slipperiness; the pedestrian.

STOECKEL, R. B., MAY, M. A., and KIRBY, R. S.

SENSE AND SAFETY ON THE ROAD. Students' ed., 304 pp., illus. New York, D. Appleton-Century Co., Inc. c1936.

Selected bibliography, pp. 288-291; principal organizations interested in highway traffic safety, pp. 292-293.

Adaptation of highways to automobiles; persons unfit to drive; personalities of drivers; examination and licensing of drivers; education of drivers and public; drinking and driving; motor-vehicle traffic laws; accidents; a 17-point safety program.

TUCKER, HARRY.

HIGHWAY ACCIDENTS IN NORTH CAROLINA AND GUIDES TO SAFETY. N. C. Engin. Expt. Sta. Bull. 9, 100 pp. 1935.

Revision of Bulletin 4, 1932, published under title "Motor Vehicle Accidents in North Carolina.

Causes of accidents, pp. 9-26, include influence of road conditions, motor vehicle, pedestrian, and motorist upon traffic accidents.

WATSON, HENRY.

STREET TRAFFIC FLOW. 395 pp., illus. London, Chapman & Hall, Ltd. 1933. Bibliography, pp. 383-388.

Principal causes of accidents; ways in which they may be avoided; records of different classes of vehicles; traffic policy generally in relation to reducing street accidents.

WHEELER, J. W.

HIGHWAY ACCIDENTS, THEIR CAUSE AND THE REMEDY. Roads and Streets 79 (6): 58-60. 1936.

Speed prime factor in accidents; co-ordination of design of motor car and highway; 30-mile roads and 80-mile cars; speed gained and price paid for it. Highway industry and motor industry must act together.

WYSE, J. F. H.

(23)SAFETY ON THE HIGHWAYS. Canad. Good Roads Assoc. Proc. 16: 123-136. 1929. Also in Canad. Engin. 57 (14) 150-L-150-R. 1929. Discussion, pp. 130-136.

First legislation for road safety was English Highway Act of 1835. Article gives historical sketch and takes up causes of accidents, safety campaign in Ontario, education in prevention. Discussion includes qualification of drivers and grade crossings.

ANALYSIS OF HIGHWAY ACCIDENTS

ANONYMOUS.

ANALYSIS POINTS TO CAUSES OF INCREASING AUTO TOLL; TWO YEAR STUDY SHOWS SUBSTANTIAL DECREASE FOR CERTAIN AGE GROUPS. Pub. Safety 4 (6): 6-8, illus. 1930.

Pedestrian deaths decrease for children, tribute is paid to safety education. More collisions with cars increase auto toll. Pedestrians have high death rate.

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ANONYMOUS.

THE HAZARD OF DRIVING AND WALKING: ANALYSIS OF MOTOR-VEHICLE ACCIDENTS AND FATALITIES. Amer. City 50 (5): 99, 101. 1935.

AMERICAN ROAD BUILDERS' ASSOCIATION, DIVISION OF CITY OFFICIALS, COMMITTEE ON TRAFFIC. (26)

CAUSES OF ACCIDENTS—PARKING IN BUSINESS DISTRICTS. Amer. Road Builders' Assoc. Proc. 27: 398-429, illus. 1930.

Discussion, pp. 427-429.

Traffic accidents; scientific approach to municipal traffic accident problem; (1) fact finding; (2) accident fact analysis; (3) putting fact analysis to work; (4) checking results of safety measures; statement concerning accident prevention which has already been done; classification of kinds of parking; time limit parking; advantages and disadvantages of elimination of parking.

BRADEN, CARL.

LOUISVILLE'S ACCIDENT DIAGNOSIS. Pub. Safety 11 (2): 22, 24, 28, illus. 1936.

Rigorous prosecution of drunken drivers has had a psychological effect on sober drivers. Most fatalities during 1935–36 period termed "automotive suicides."

DENNIS, T. H.

MAJOR HIGHWAY CASUALTY FACTORS DISCUSSED BY EXPERT. Motor Carrier 14 (3): 3-4. 1936.

Night accidents predominate; two-car accidents are more numerous than single-car accidents; tail-light law effective; night driving speeds for passenger cars are probably too high; intoxicated driver should be subject of unique attention; safety devices ignored; all age groups involved.

ELIOT, W. G., 3d.

THE RISING ACCIDENT RATE. Miss. Valley Conf. State Highway Depts. [Papers] 27: 92-98. 1935. Also in Pub. Roads 16: 7-11, illus. 1935.

Analysis of possible causes of increase in accidents; increased speed; safer highways and checks on excessive speed; licensing drivers; study of accident causes necessary for proper corrective measures.

FOLLEY, W. C.

TRAFFIC ANALYSIS FROM POLICE RECORDS. Okla. Univ. Highway and Street Conf. [Addresses] (1935) 1: 126-128. Norman, Univ. Okla. Press. 1936.

The conference [addresses] were published under the title "Street and Highway Problems: A Symposium."

Study based on the Norman Police Department reports from January 1, 1933, to July 1, 1934.

FORD, A.

MANY OVER 45 VICTIMS OF SPEEDING MOTOR CARS. Weekly Underwriter 124: 440. 1931.

University of Michigan expert analyses accidents in relation to age; best risks ages 15 to 24.

HEINRICH, H. W.

HUMAN ELEMENT CHIEFLY RESPONSIBLE FOR APPALLING RECORD OF AUTOMOBILE CASUALTIES. Nation's Traffic 2 (11): 13-14. 1929.

An accident analysis which does not confuse types of accidents with accident causes.

NATIONAL RESEARCH COUNCIL, DIVISION OF ENGINEERING AND INDUSTRIAL RE-SEARCH, HIGHWAY RESEARCH BOARD, COMMITTEE ON HIGHWAY TRAFFIC ANALYSIS. (33)

REPORTS. Natl. Research Council, Div. Engin. and Indus. Research, Highway Research Bd. Proc. (1928) 8: 81–98, illus., 1929; (1929) 9: 87–137, illus., 1930.

Trafficway, unsafe cars, roadway width and traffic capacity, and motor vehicle accidents in Pennsylvania are discussed in the 8th report.

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NATIONAL RESEARCH COUNCIL

Discussion, 9th report, pp. 122–137, mentions toll bridges and toll highways; traffic planning; motor-vehicle parking and stopping; installation and operation of traffic-control signals; train-actuated signals at railroad grade crossings; left turns; theoretical limits to traffic capacity; measure of traffic congestion; traffic lane marking; independent highway routes for high-speed and low-speed traffic.

REEDER. E. J.

NATIONAL STUDIES OF SURVEY DATA ON LAW OBSERVANCE. Inst. Traffic Engin. Proc. 5: 83-85, 1934.

Observations on characteristics of high-accident locations; obedience to stop-and-go signals by drivers and pedestrian observance of stop signs, hand signaling and vehicle turning, from F. C. W. and F. E. R. A. studies.

BOCKWOOD, H. L.

WHY ALL THESE DEATHS. Ohio Motorist 22 (2): 5, 35-36. 1930.

Based on analysis of 898 deaths caused by motor vehicles in Cleveland in 44 months, each case individually analyzed by the Cleveland Automobile Club and the Cleveland Safety Council.

UPHAM, C. M.

AN ANALYSIS OF HIGHWAY ACCIDENTS, THEIR CAUSES AND METHODS OF PREVEN-TION. Nation's Traffic 3 (6): 20-21. 1929.

Table of highway accident fatalities during 1927 shows number and major contributive causes.

UNITED STATES FEDERAL CIVIL WORKS ADMINISTRATION.

ENGINEERING MANUAL FOR TRAFFIC SURVEYS: A MANUAL COVERING THE METHOD OF ORGANIZING AND CONDUCTING EACH OF SEVERAL IMPORTANT STUDIES OF A TRAFFIC SURVEY, INCLUDING FIELD AND OFFICE FORMS AND DETAILED INSTRUC-TIONS FOR THEIR USE. Variously paged, illus. Washington. 1934.

Accident analysis, secs. 2, 3, 4. "Worst corner" list; collision diagrams; condition diagrams.

VANDONE, I.

PSICOTECNICA ED INFORTUNI STRADALL. LE Strade 14: 265-270, 293-299, illus. 1932.

Analysis of statistical data on automobile accidents in 12 principal cities of Italy; psychological aspects of automobile accidents; classification of accidents as to cause.

VEY, A. H.

HIGHWAY FACILITIES AND MOTOR VEHICLE ACCIDENTS. Assoc. Highway Off. North Atlantic States Proc. 10: 64-81, illus. 1934. Abstract in Roads and Streets 77: 232-236. 1934.

Analysis of accident records; inherent control, such as grade separations, islands, divisional islands, rotary islands, channelizing islands; applied control, such as traffic-control signals, signs and markings; highway lighting. Based on experience in New Jersey.

VIRGINIA GOVERNOR'S ADVISORY LEGISLATIVE COUNCIL.

AUTOMOBILE ACCIDENTS IN VIRGINIA: REPORT TO THE GOVERNOB OF VIRGINIA CONTAINING RECOMMENDATIONS SUBMITTED BY THE GOVERNOR'S ADVISORY LEG-ISLATIVE COUNCIL. 22 pp. Richmond, Va., Div. of Purchase and Print. 1936.

Attached to, and made a part of this report, is an analysis of automobile accidents in Virginia during the first 10 months of 1935, prepared by the division of motor vehicles.

CAUSES OF HIGHWAY ACCIDENTS

GENERAL DISCUSSIONS

ANONYMOUS.

THE CAUSES AND PREVENTION OF AUTOMOBILE ACCIDENTS: A FEW STATISTICS. Travelers Standard 19: 61-80, illus. 1931.

Automobiles and highways have been improved to such an extent that mechanical defects and road conditions have become relatively unimportant in accident causation. Human failures are chiefly responsible for toll of deaths and injuries,

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CAUSES OF STREET ACCIDENTS. CAUSES OF COLLISIONS. Street Accidents 1 (1): 2 1931.

Practices that cause accidents shown in monthly classification, giving comparative figures for corresponding months of last 2 years in New York City.

CAUSES OF AUTUMN MOTOR FATALITIES. Metropolitan Life Ins. Co. Statis. Bull. 17 (9): 6-7. 1936.

Reduced number of daylight hours and rain and fog are given as the chief causes.

- (45) CULTIVATING THE GRIM REAPER: A SATIRE ON THE MISUSE OF THE AUTOMOBILE, Safety Engin, 69: 159-161, 1935.
- (46) "THE DANGEROUS AGE". THE FATAL-ACCIDENT BECORD OF YOUNG DRIVERS INDI-CATES THAT THEY SHOULD RECEIVE DEFINITE AND SYSTEMATIC INSTRUCTION IN AUTOMOBILE SAFETY. Travelers Standard 22:68-71, illus. 1934.

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"DROVE OFF ROADWAY". Travelers Standard 20: 161-163, illus. 1932. Driving off the roadway caused nearly 24 percent of all fatalities arising

from faulty operation of automobiles in 1931.

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FACTS ABOUT SERIOUS MOTOR CAB ACCIDENTS ALL OF WHICH COULD HAVE BEEN PREVENTED. Weekly Underwriter 131: 321, 340-342. 1934.

"This article which was released by the Employers' Liability under the title 'It Shouldn't Have Happened' is replete with excellent materials for use in the highway accident campaigns in which all casualty companies are vitally interested."

Recital of cases in which serious accidents resulted from carelessness and recklessness.

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"FATALOMETER" SHOWS HOW ACCIDENTS OCCUR: BIRMINGHAM SAFETY COUNCIL INAUGURATES NOVEL PLAN TO EDUCATE PUBLIC ABOUT TRAFFIC HAZARDS. Pub. Safety 7 (3): 11, illus. 1933.

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- DE LEVENSGEVAABLIJKE: PARAPLUIE. De Auto [Netherlands] 33: 1646, illus. 1936.
 - Among the death hazards umbrellas are mentioned.
- MAKING THE FRONT PAGE: WEEK-END AUTOMOBILE FATALITIES. Travelers Standard 19: 141-149, illus. 1931.

Mechanical devices and the human machine; mental and muscular action; most prolific causes of accidents; more education needed.

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- THE MAN AND THE MACHINE. Travelers Standard 20: 81-86, illus. 1932. Thousands of situations arise in which stopping a car in the shortest possible time and distance becomes absolutely necessary. Includes table of stopping distances.
- MOTORISTS AND ROAD KERBS: HAVE THEY A REAL GRIEVANCE? By a motorist and highway engineer. Surveyor and Munic. and County Engin. 76: 398. 1929.

Editorial, p. 370, under title "Kerbs on Country Roads."

Function of kerbs; when kerbs are absent; rights of the pedestrian.

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REAR-END COLLISIONS. Travelers Standard 20: 230-237. 1932.

Table showing shortest possible stopping distances under good conditions, p. 234; graphic presentation of possibility of rear-end collisions when one car is following another too closely, pp. 230–231.

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(55)ANONYMOUS. TRAFFIC ACCIDENTS AND MENTAL RESEARCH : EMINENT PSYCHOLOGISTS ADVO-CATE MENTAL RESEARCH AND STRINGENT TESTS FOR PREVENTION OF MOTOR VEHICLE ACCIDENTS. Safety Engin. 72: 69-70. 1936. (56)WHAT ACCIDENT REPORTS WOULD TELL IF THE ROADS COULD SPEAK. Highway Mag. 20 (1): 6-7. 1929. The road is never entirely innocent. Chart shows sole or contributing causes of accidents. (57)WHERE ACCIDENTS HAPPEN. Automotive Indus. 72: 532, illus. 1935. Composite picture showing places where accidents occur and giving num-ber for each; e. g., "curve, 42,340 accidents." Data for 1934 are taken from the Shell Globe. (58)AMERICAN ASSOCIATION OF MOTOR VEHICLE ADMINISTRATORS. DIAGRAMS OF DANGER. [10 pp.], illus. New York. [1935.] A series of 10 newspaper articles written and signed by the chief motor vehicle authorities of 10 States, all officers and members of the American Association of Motor Vehicle Administrators. "The series was prepared under the direction of the Association's Safety Committee . . . with the cooperation of the National Bureau of Casualty and Surety Underwriters. One Park Avenue, New York, N. Y." (59)ARCHER, FRED. TRAFFIC FOLLIES. Westways 28 (9): 15, illus.; (10, pt. 1): 15, illus.; (11): 13, illus. 1936. Photographs show causes of traffic accidents. AUTOMOBILE MANUFACTURERS ASSOCIATION, INC. (60)CAR IS SAFE, THE ROAD IS SAFE, WHEN YOU DRIVE SAFELY. Ed. 2, [24 pp.] New York. Automobile Manfrs. Assoc. 1935. The Rules of the Game, by Dr. Miller McClintock, pp. [5-9]; Mile-a-minute Men, by Gov. Harold G. Hoffman, pp. [10-24] BAKER, J. S. (61)DO TRAFFIC ACCIDENTS HAPPEN BY OHANCE? Natl. Safety News 20 (3): 12-14. 1929. Careful study of accident records made by National Safety Council in cooperation with New York State Bureau of Motor Vehicles. Chance may create dangerous situations, but the driver's lack of capacity to extricate himself is usually the accident cause. BREED, C. B. (62)REPORT UPON COST OF ROADS REQUIRED FOR HEAVY MOTOR VEHICLES COMPARED WITH COST OF ROADS ADEQUATE FOR PASSENGER AUTOMOBILES AND LIGHT TRUCKS, MADE TO THE ASSOCIATED RAILROADS OF PENNSYLVANIA. 60 pp., illus. Cambridge, Mass. Inst. Technol. 1933. Hazards to passenger car traffic caused by heavy trucks and bus traffic, p. 42. BURCH, J. S. (63)MOTOR ACCIDENTS ARE CAUSED: NORTH CAROLINA ACCIDENT STUDY RESULTS IN DEFINITE CONCLUSIONS AS TO CAUSES AND REMEDIES. Motor Freight 8 (8): 9-11. 1936. DENNIS, T. H. (64)TRAFFIC ACCIDENT STUDY REVEALS MAJOR HIGHWAY CASUALTY FACTORS ARE BAD DRIVING, HIGH NIGHT SPEEDS, AND PACE DIFFERENTIAL BETWEEN TRUCKS AND AUTOS. Calif. Highways and Pub. Works 14 (3): 4, 12, 26, illus. 1936. Also in Southwest Builder and Contractor 87 (18): 10-11, illus., 1936, under title "64 Percent of Accidents on Highways Occur During Night." ELIOT, W. G., 3d. (65)

THE CAUSES OF HIGHWAY ACCIDENTS. Mich. Univ. Conf. Highway Engin. Proc. 14: 244-255. 1928. Also in Mich. Roads and Pavements 25 (9): 28-30. 1928.

Surface, alinement, or other features of the highway; design or construction of the motor vehicle; regulation of traffic or the absence of such regulation; personal factor.

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EYNON, B. G. (66)SOMEONE IS ALWAYS TO BLAME. Natl. Motorist 1930 (Jan.) : 7-9, 20-21, illus. 1930 Sixty percent of victims of motor cars are persons afoot. HADDOCK D.V. (67)UNUSUAL HAZARDS GIVE ARKANSAS A DIFFICULT PROBLEM. Pub. Safety 5 (1): 28. 30. 1931. Unlighted wagon is a menace: much education is needed; law requires lights. HESS. C. N. (68)WHAT CAUSED THE ACCIDENT ?: AN ANALYSIS OF THE NATURE OF MOTOR VEHICLE CASUALTIES IN SOUTHERN CALIFORNIA. Touring Topics 20 (7): 33-34, 47. 1928 "Incompetent handling" was responsible for more fatalities during the 4-year period, 1923-26, in 13 southern California counties than was any other one cause. HOFFMAN, P. G. (69)DRIVE FOR HIGHWAY SAFETY. Automobile Topics 121 (1): 21, 28, illus. 1936. Interview over radio by Boake Carter concerning automobile industry's underwriting of major campaign to reduce highway accidents. (70) HOLMES. J. J. AUTOMOBILE ACCIDENTS AND SAFE DRIVING. JOUR. Amer. Ins. 11 (11): 21-22. 1934 "There is no question that speed coupled with careless driving habits accounts for the 29,900 lives lost and the 850,700 persons injured last year." HUMPHREY, S. K. (71)OUR DELIGHTFUL MANKILLER. Atlantic Monthly 148: 724-730. 1931. Causes and means for reducing motor accidents. Rate of kill is increas-ing faster than is the number of cars on the road. The rate per 100,000 registrations rose without a break in the last 5 years from 106.6 to 124.4. (72)JENSEN, HOLGER. TRAFFIC'S WORST OFFENDERS. Safety Engin. 68: 229-230, 232, illus. 1934. Sixty percent of traffic accidents caused by 10 percent of the drivers; no mercy should be shown in dealing with the incompetent or incorrigible 10 percent. Chart shows stopping distances. KERLEE, C. E. (73)HOW ACCIDENTS OCCUR. Westways 27 (7): 24-25, illus. 1935. Photographs show practices which are among the worst causes of accidents. (74)WHERE ACCIDENTS OCCUR. Westways 27 (6): 20-21, illus. 1935. Photographs illustrate types of locations that show high accident frequency. Some suggestions are given on how to avoid the perils of these danger spots. KILLICK, V. W. (75)AMBULANCE SERVICE FOR HIGHWAYS. Amer. Highway 11 (2): 18-19. 1932. Officers of the California Highway Patrol report that in their opinion at least 15 motor-vehicle deaths were due to inability to get adequate ambulance service and medical attention in time, during 1930. (76)KLEIN, KARL. SCHRECKSEKUNDE ODER AUSWIRKUNGSZEIT? IHRE BEDEUTUNG FÜR DIE BEUR-TEILUNG VON VERKEHRSUNFÄLLEN. Verkehrstechnik. 33: 565-566. 1929. Time required for reacting and its significance in traffic accidents. KREML, F. M. (77)

EVANSTON CONVICTS VIOLATORS ON "PICTURE" EVIDENCE. Pub. Safety 4 (2): 5-6, illus. 1930.

Describes unique system.

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KREWL F. M. (78)50,000 AUTOMOBILE DEATHS A YEAR BY 1945. Jour. Amer. Ins. 13 (4): 13, 22. illus. 1936. Exposure to accidents will be greater with the increase in the number of automobiles in operation. The automobiles are becoming faster, smoother. and quieter in their operation so the driver does not often realize that he is going so fast. The driver will remain the same. (79)NEWTON, G. D. PUBLIC APATHY SCORED IN HIGHWAY ACCIDENTS. Safety Engin. 70: 100-101. 1935. Talk before New Jersey State Safety Conference called in Trenton, September 11, 1935, by Gov. H. G. Hoffman. (80)PEW. M. E. EDITOR LOOKS AT THE TRAFFIC MENACE. Pub. Safety 7 (5): 6-7, 15. 1933. Excerpts from an address given before the fourth annual Greater New York Safety Conference, March 2, 1933. Tells why the traffic menace exists and what the press can do about it. POTTER, R. D. (81)

PERIL ON THE ROAD; DRIVER, CAR, AND ROAD ALL CONTRIBUTE THEIR PARTS TO ANNUAL TOLL OF 36,000 DEAD AND MILLION INJURED. Sci. News Letter 29: 398-401, illus. 1936.

REEDER. E. J.

ACCIDENT FACTS SPOT TRAFFIC ILLS. Natl. Safety News 23 (3): 36, 40, illus. 1931.

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Discusses the value and use of statistics in studying and preventing traffic accidents.

ACCIDENT PROBLEMS OF RURAL HIGHWAYS. Highway Mag. 23: 209-211, illus. 1932.

Driver's part and the occurrence of accidents at spots not apparently dangerous, particularly on straight roads where pavements are slippery, are discussed.

COLLISION DIAGRAMS REVEAL THE TRAFFIC HAZARD. Pub. Safety 5 (4): 18-19. 33, illus. 1931.

Illustrations show the development of a collision diagram covering a year's experience at an intersection in Richmond, Va.

SPOTTING ACCIDENTS. Pub. Safety 11 (6): 22-23, 56, illus. 1936.

A well-planned, a well-kept spot map will show clearly where accidents are grouping themselves.

THERE IS A DANGER IN OVERWORKED SPOT MAPS. Pub. Safety 5 (3): 17-18. illus. 1931.

Three classifications are enough; too much information is confusing. ROBERTSON, W. G. (87)

HIGHWAY SAFETY. Canad. Good Roads Assoc. Proc. 22: 167-184, 1936.

Motor vehicle accident totals; chief factors in highway safety; the modern motor vehicle; faults of drivers as accident causes; uniformity in laws and accident reports; accidents on the King's highways; law enforcement; building safety into road; municipal traffic problems; railway level crossings; railway crossing signals; night accidents and road lighting; threeand four-lane highways.

SMITH, W. S.

(88)A BURAL TRAFFIC ACCIDENT INVESTIGATION. Mich. Univ. Conf. Highway Engin. Proc. 20; 49-60. 1934. Also in Mich. Roads and Airports 31 (11): 38-40. 1934.

Gives statistics and causes of accidents in a number of Michigan counties. Statistics show that the man behind the wheel is responsible for greatest number of accidents.

SMITH. W. S.

WASHTENAW COUNTY ACCIDENT INVESTIGATION. Mich. Univ. Conf. Highway Engin. Proc. 19: 219-238, illus. 1933. Also in Mich. Roads and Airports 30 (10): 29-32, 1933.

Gives conclusions as to causes.

TAYLOR, C. P.

HIGHWAY ACCIDENTS. Jour. Boston Soc. Civ. Engin. 21 (1): 16-35, illus. 1934. Excerpts in Roads and Streets 77: 158, 1934, under title "Traffic Accidents in Night Driving."

Discusses various causes of fatalities: motor-vehicle-accident problems: progress in Massachusetts; accidents on Massachusetts State highways; accident analysis; accidents after dark; collisions; pedestrian accidents; left-turn accidents: right-turn accidents: relative seriousness of accidents.

UTICA MUTUAL INSURANCE CO.

MURDER ON THE HIGHWAY. 10 pp. Utica, N. Y., Utica Mutual Insurance Co. c1936. (Utica Mutual Ins. Co. Bull. 317.)

"We must tell, not how many died, but how they died, to bare the gruesome facts of the aftermath of automobile accidents, if we are to strike deep into the sensibilities of the motorist and jar him loose from his apathy."

WILLIAMS, S. J.

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PROGRESS IN PROMOTING HIGHWAY SAFETY. Natl. Research Council. Div. Engin. and Indus. Research, Highway Research Bd, Proc. (1935) 15: 294 - 299.[1936.]

Discussion by Dr. H. C. Dickinson, pp. 297-299.

"The paper tells what has been learned about accident causes, including factors in the vehicle, the highway, drivers and pedestrians." - p. 294.

MOTOR-VEHICLE DRIVERS

ANONYMOUS. AMHERST PSYCHOLOGICAL TESTS GIVE NEW DRIVERS' PRONENESS TO AUTO CRASHES. East, Underwriter 36 (9): 44, 1935.

Tests conducted by Harry R. DeSilva. Color-blind and alcohol tests; cope with highway dangers; steering alertness; many badly "glare-blind."

(94)DRIVER EDUCATION HELD ONLY REMEDY FOR RISING ACCIDENT RATE: STUDY OF MOTOR VEHICLE CASUALTIES IN CONNECTICUT DURING 1927 SHOWS INCREASE OF 10 PER CENT OVER PRECEDING YEAR. Automotive Indus, 59: 236-237, illus. 1928.

Table gives summary of results of motor vehicle accidents in Connecticut. 1923-27.

THE DRIVER'S REACTION TIME: HOW IMPORTANT IS IT IN SAFE OPERATION ? Natl. Safety News 33 (1): 36, 52-53. 1936.

Kinds of reaction time; how reaction times vary; reaction time in driving; measuring reaction time; selecting drivers.

HOW RAINFALL AND FATIGUE AFFECT TRAFFIC: CHARTS PREPARED BY SEATTLE DEPARTMENT OF STREETS AND SEWERS SHOW STRIKING RELATIONSHIP. Pub. Safety 5 (6): 15, illus. 1931.

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LEARNING TO DRIVE. Pub. Safety 11 (4): 15, illus. 1936.

New practice driving course is being constructed in Chicago.

NIGHT DRIVING ABILITY MEASURED BY MACHINE. Pub. Safety 11 (6): 44, illus. 1936.

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Combines the operating mechanism of an automobile driver's seat, steering wheel, instrument board, accelerator, brake, etc., and a simulation of an open road at night upon which the driver sitting at the wheel controls a miniature car.

MISC. PUBLICATION 296, U. S. DEPT. OF AGRICULTURE 12 (99)ANONYMOUS. NOVEL DEVICE REGISTERS REACTION TIME. Pub. Safety 9 (6): 14-15. illus. 1935. Describes the Aetna "reactometer." (100)BEACTION TIME. Pub. Safety 10 (1): 26-27, illus. 1936. Describes some of the complexities of reaction time tests among drivers and stresses the fact that accuracy of reaction, as well as speed of reactions should be taken into consideration. Based on National Safety Council. Public Safety Memo 95. (101)TESTING FOR DRIVER'S SKILL. Safety Engin. 71: 66. 1936. The Aetna Casualty and Surety Co. announces development of highwaysafety demonstration comprising a battery of electrical and mechanical units for testing various phases of driving skill. (102)TESTING SPEED OF DRIVER'S REACTIONS. Automobile Topics 119: 23. illus. 1935. Tests conducted by the Minnesota Public Safety Committee at Minneapolis. (103)TESTS RECORD REACTION TIME IN APPLYING BRAKES: STANDARD OIL AND AETNA JOIN IN DEMONSTRATION. Automotive Daily News 20 (2255): 6. illus. 1935. In co-operation with Detroit Police Department. (104)WHY THEY DRIVE THAT WAY. Natl. Safety News 29 (4): 15-18. 1934. Accident proneness may be defined as "the mind at mischief" intentionally or unintentionally; table showing classification of psychological conditions which affect or limit attention, p. 16. AETNA CASUALTY & SURETY CO. (105)LET'S BE SKILLFUL. 13 pp., illus. Hartford, Conn. [1936?] Published in the interest of highway safety. Illustrates the right and wrong ways of driving. ANDERSON, V. V. (106)WILL HE MAKE A GOOD DRIVER? Natl. Safety News 23 (6): 15-16, 72-73, 1931. illus. Abstract of an address before the Commercial Vehicle Session, second annual Greater New York Safety Conference. Modern methods of evaluating the driver's skill and dependability minimize the element of chance. (107)ASHLEY. M. P. ANTI-SOCIAL BEHAVIOR OF AUTOMOBILE DRIVERS. Sociol. and Social Research 14:531-546.1930."Bad driving" is characterized by "temperamental and physical unfitness," "insecure equipment," "carelessness," "selfishness," "lack of consideration," etc. To this type of driving, a large percentage of accidents are due. BAKER, J. S. (108)CLASSIFYING PERSONAL CAUSES OF TRAFFIC ACCIDENTS. Natl. Safety News 19(1): 23-24, 1929.

Contains schedule of personal factors in traffic accidents. Three important groups of personal factors or "human elements" have been recognized: natural handicaps, ignorance, and inadvertency.

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A CLINICAL STUDY OF ACCIDENTS. Pub. Safety 10 (6): 32-33, illus. 1936.

Discusses effect of physical condition of driver and tells how indigestion leads to accidents. BAKER, J. S.

FINDING THE HIGH ACCIDENT DRIVERS. Pub. Safety 7 (1): 20-23, illus. 1933. Figures show curves used as a means of visualizing the true accidentsusceptibility condition in any given group of drivers.

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HOW TRAFFIC ENGINEERS CAN ASSIST IN DEALING WITH THE HUMAN ELEMENT IN THE TRAFFIC PROBLEM. Inst. Traffic Engin. Proc. 5: 15-18. 1934.

Discusses the common characteristics, namely, physical strength and energy, vision, reaction time, and mental discolorations.

(112) REVOCATION VS. EXAMINATION. STATES WHICH TEST NEW DRIVERS ALSO HAVE BEST RECORDS OF SUSPENSIONS. Pub. Safety 8 (6): 13, 1934.

BARSANTEE, HARRY.

"AUTO FATIGUE" AND ACCIDENTS. Pub. Safety 9 (10): 18-19, illus. 1935.

Tests were sponsored by Dodge division of Chrysler Motors. Dr. Andrew H. Ryan was in charge of the work.

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DEATH STALKS THE TIRED DRIVER. Natl. Safety News 31 (2): 11-12, 59, illus. 1935.

"Too long at the wheel" is the story behind many a tragedy on the highway.

BARTHOLOMEW, G. H.

DISTRACTION AND FATIGUE—THE KILLERS. Natl. Safety News 22 (4): 89-90, 155-156, illus. 1930. Also in Travelers Standard 18: 181-190, illus. 1930. Traffic congestion, high speed, and highway conditions make special demands on operator for his constant, undivided attention.

BILLINGS, CURTIS.

ARE YOU SAFE TO DRIVE? Atlantic Monthly 153: 295-302. 1934. Also in Jour. Amer. Ins. 11 (3): 15-18, 21, 1934 under title "Testing the Auto Driver." Abstract in Mech. Engin. 56: 361-362, 1934, under title "Tests for Drivers of Motor Vehicles."

Means devised by which capacity to operate a motor car safely may be determined for any individual. Researches conducted by Dr. Lauer at Iowa State College into the personal causes of automobile accidents.

SCIENCE MEASURES DRIVER'S DEFECTS. Natl. Safety News 30 (1): 9-11, 48, illus. 1934.

Account of research into physical attributes of drivers, carried out by A. R. Lauer at Iowa State College, which has uncovered many obscure defects having important bearing on safe driving.

BINGHAM, W. V.

PERSONALITY AND PUBLIC ACCIDENTS. Natl. Safety Council Trans. 17 (v. 3): 174-192. 1928; 19 (v. 3): 140-150. 1930.

Study of the problem of locating accident-prone drivers; diagnosis and treatment; how difficulties may be removed.

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THE PRONE-TO-ACCIDENT DRIVER. Mich. Univ. Conf. Highway Engin. Proc. 17: 23-42, 1931. Also in Mich. Roads and Airports 28 (11): 18-21. 1931.

Kinds of prone-to-accident drivers; locating the accident-prone; finding the causes; study of accident proneness in relation to wrong attitude, lack of aptitude, and health defects; individualized treatment and cure; need for research; practical suggestions.

BISCAILUZ, E. W.

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CARELESS FAULTS OF CAREFUL DRIVERS. Colo. Highways 8 (12): 8-9. 1929. Tells of accident-causing practices of motorists who consider themselves careful drivers.

(121)BLACK. B. W. AMERICA'S ACCIDENT TOLL-WHAT CAN WE DO TO REDUCE IT. Calif. Safety News 19 (2): 9-12. 1935. Paper read before the Western Safety Conference held in San Francisco June 11-13, 1935. Speed and alcohol are the chief causes of accidents. The author proposes a 10-clause pledge for drivers. (122)BLACK. L. W. UNSAFE PRACTICES ON OUR HIGHWAYS. All Ohio Safety Cong. Proc. 6: 212-219. 1935. One-third of the accidents are caused by slow drivers. (123)BRAMESFELD, E. AUFMERKSAMKEITSLÜCKEN BEIM AUTOFAHREN. Autobahn no. 7. pp. 274-275. 1934. Lack of attention to driving by motorists is pointed out. (124)CHARLES DON. MOTORISTS DRIVE BY INSTINCT. Highway Mag. 22: 235-237, illus. 1931. Psychology plays a large part in safe driving. It is the appearance of the road that affects the driver's mind, according to government tests. (125)CHRYSLER, W. P. IT'S UP TO THE DRIVER. 11 p. [Detroit, Chrysler Corp.] [1935] Reprinted from the November 30, 1935, issue of the magazine Today. Individual responsibility; elements of highway safety; what research is doing; importance of easy control; promoting safe driving; pedestrians must learn, too; industry's cooperative efforts; law enforcement necessary; education: common sense. CONNECTICUT STATE DEPARTMENT OF MOTOR VEHICLES. (126)REPORT OF A STATE-WIDE SURVEY OF OPERATORS TESTS AND COMPREHENSIVE STUDY OF 1935 FATALITIES WITH SPECIAL ATTENTION TO RECORDS OF "REPEAT-ERS" AS COMPILED BY W. P. A. PROJECT 1603. Variously paged. Hartford. Conn. 1937. [Processed.] (127)CRIDER, J. H. DEATH ON FOUR WHEELS . . . ELEMENT OF CHANCE MUST BE MINIMIZED . . . STATE ACCIDENT SURVEY SHOWS THE WAY . . . CULTIVATE THE PROPER ATTI-TUDE TOWARD OTHER DRIVERS. Sci. Amer. 154: 122-124, illus. 1936. Highlights of the Massachusetts highway accident survey made by the Massachusetts Institute of Technology. (128)CROWDER, FARNSWORTH. ARE YOU FIT TO DRIVE? Westways 27 (8): 30-31, illus. 1935. Scientists, studying men as engineers study roads and motors, are learning strange facts. The article includes some of the findings of Dr. A. R. Lauer at Iowa State College. (129)DESILVA, H. R. INSTRUMENTS AND METHODS FOR MEASURING DRIVING SKILL. Instruments 9: 101-108, illus. 1936. Braking reaction: steering skill: speed-and-timing estimation: visual test: auditory tests; detection of fatigue and other physiological reactions. Bibliography, p. 108. (130)SCIENTIFIC TESTS FOR SAFE DRIVING. East. Underwriter 36 (21): 39-40. 1935. This article is based on an address made at the Massachusetts safety conference in Boston. Elimination of accident-prone driver objective; brake reaction time and steering ability of thousands of people gauged; National Psychological Institute would help. Dow, M. A. (131)

STAY ALIVE! IN WHICH JIM THE TRUCKMAN GENTLY KICKS THE DEIVIN' FOOLS AND WALKIN' YAPS. 209 pp., illus. New York, Marcus Dow, Inc. c1928. Illustrates the personal element in automobile accidents. EYNON. B. G.

"WHAT GETS MY GOAT." Nation's Traffic 3 (5): 38-41, illus, 1929 Also in Ohio Motorist 21 (8): 18-19, 32, illus. 1929.

Too many men and women driving motor cars are mentally unfit.

GEIGER. J. C.

(133)100 H. P. CARS: H. P. MINDS. Natl. Safety News 29 (6): 15-16, 53, 1934 "Stone age mentalities plus motor age equipment make a dangerous combination on the highway.

Most serious cause of traffic accidents is inattention, or lack of concentration on driving.

(134)GENERAL MOTORS CORPORATION, DEPARTMENT OF PUBLIC RELATIONS. WE DRIVERS: A SERIES OF BRIEF DISCUSSIONS ON DRIVING, DEDICATED TO THE SAFETY, COMFORT, AND PLEASURE OF THE MOTORING PUBLIC. 36 pp., illus. Detroit, Mich. 1935. Also in the Ohio Motorist 26 (12): 3, 17, illus.; 27 (1): 3, 21, illus. 1936.

GRANNISS, E. R.

GENTLEMEN ON THE HIGHWAY. Travelers Standard 21 (11): 201-208, illus. 1933.

Good drivers stay in line. The middle-of-the-road driver, and the superiority complex, are discussed. Correct bad habits and accidents will stop.

HAMLIN, G. E.

HOW CONNECTICUT HANDLES THE TRAFFIC PROBLEM. Pa. Safety Cong. Proc. 1928; 209-215. 1928. (Pa. Dept. Labor and Indus. Spec. Bull. 19). One of fundamental causes of accidents is the failure of the mind to act.

HAMILTON, J. R., and THURSTONE, L. L. (137)SAFE DRIVING, HUMAN LIMITATIONS IN AUTOMOBILE DRIVING. 74 pp., illus. Garden City, N. Y., Doubleday, Doran & Co., Inc. 1937.

HENDERSON, YANDELL.

DRIVER'S OWN REFLEX ACT THROWS CAR "OUT OF CONTROL": SUDDEN JOLTING MAKES ANYONE STIFFEN ARMS AND PRESS WITH FEET; SAFETY PEDAL IS RECOMMENDED AS REMEDY. Sci. News Letter 28: 339. 1935.

News auto appliance to prevent 10 percent of all serious automobile accidents is described in a report to the National Academy of Sciences.

HOARE, A. E.

HOW GOOD ARE THE DRIVER'S EYES. Natl. Safety News 34 (2): 33-34, 69. 1936. This article is based upon a talk given before groups of employees of the Union Oil Co. of California and their families.

If the message which visual impression conveys to driver's brain is deficient in any respect, time reaction, as well as nature of reaction, will be affected.

HOLIDAY, BERT.

CARE MAKES THE WHEELS RUN TRUE. Amer. Motorist 4 (10): 7. 1936.

"Safe drivers of each of forty-eight states and national capital conclude that good 'motor manners' offer basis for greater degree of safety on the highways."

INTERNATIONAL HARVESTER COMPANY, CHICAGO.

I DRIVE SAFELY. 61 pp., illus. Chicago. 1935.

Published in the interest of safety on the highways.

JOHNSON, H. M.

BORN TO CRASH. Collier's 98 (4): 28, 58, 60, illus. 1936.

Results of 8-year study of the Committee on Psychology of the Highway, National Research Council, with the cooperation of four large companies, show that there are accident-prone drivers.

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(143)TONCAS E F. HOW TO MAKE AUTOMOBILE USERS TRAFFIC-CONSCIOUS. Canad. Good Roads Assoc, Proc. 17: 125-135. 1930. Also in Canad. Engin. 59 (13): 129-132. under title "Traffic Consciousness for Drivers." Discussion by Arthur Gaboury, pp. 131-134. Also in Canad. Engin. 59 (14): 513-514, 1930, under title "Making Road Users Traffic Conscious." Discussion by G. L. Ingram, pp. 134-135. Also in Canad. Engin. 59 (13): 156-157, 1930, under title "Prevention of Highway Accidents." Discusses suspension of licenses, compulsory insurance, requisites of drivers; training of drivers, and tests for applicants. Stop law advisable at level crossings. (144)KETTERING. C. F. VEHICLE-DRIVER PSYCHOLOGY. Jour. Soc. Automotive Engin. 27: 493-494. 1930. Also in Prof. Engin. 15 (July): 7-8. 1930. Radio address presented by the National Broadcasting Co. in cooperation with the National Safety Council. (145)KIRBY, R. S. RIGHT TO DRIVE. Atlantic Monthly 147: 438-444. 1931. A discussion of the growing toll of automobile accident deaths. (146)KIRKBRIDE, B. H. DRIVING ERRORS. Travelers Standard 24 (2): 21-27. 1936. List of unsafe practices and conditions, p. 22. (147)LAIRD, D. A. MENTAL HAZARDS IN MOTORING. FORUM 85: 16-20, illus. 1931. Subjects discussed are: Fatigue and power intoxication result in accidents; gasoline jags; frustration impulses; dangerous exhibitionists: backseat driver. LAUER. A. R. (148)THE EYES BEHIND THE WINDSHIELD. Natl. Safety News 26 (5): 34, 36, 66-67. 1932. Problems of vision and their relation to automobile driving. (149)HOW CAN WE MEASURE DRIVING ABILITY? WHAT TYPES OF PERSONS HAVE ACCI-DENTS? DISABILITIES THAT CAUSE ACCIDENTS. Natl. Safety News 26 (1): 25-26, 64-65, illus.; (2): 16-17, 64, illus.; (4): 48-49, 86-87. 1932. Describes the findings of 2 years of research at Ohio State University, under the auspices of the National Research Council, methods of diagnosing accident proneness, and classification of various types of persons who have accidents, and gives practical suggestions for correcting their difficulties. (150)HOW WELL CAN THE DRIVER SEE? Natl. Safety News 31 (3): 19-20, illus. 1935. Driver with seriously defective vision is generally regarded as a highway menace. This article describes the more common types of visual defects and possibilities. (151)

IMPROVEMENT IN HIGHWAY SAFETY. Natl. Research Council. Div. Engin. and Indus. Research, Highway Research Bd. Proc. (1932) 12 (pt. 1): 389-401, illus. 1933. Also in Amer. Highways 12 (3): 13-14, 17. 1933. Discussion, pp. 400-401.

Reviews work of the Committee on Psychology of the Highway, Division of Psychology and Anthropology, National Research Council, and embraces study of drivers' reactions, improvement in license plates, simplicity of directional signs, optimal colors for stop lights, road markers, and related items.

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METHODS OF MEASURING THE ABILITY TO DRIVE AN AUTOMOBILE, WITH SUGGES-TIONS FOR USE AS A BACKGROUND FOR RESEARCH, SAFETY TRAINING, AND FOR EDUCATIONAL PURPOSES. Iowa Engin. Ext. Serv. Bull. 115, 39 pp., illus. Ames, Iowa. 1936.

LAUER, A. R. (153) RECKLESSNESS IN DRIVING. Natl. Safety News 26 (6): 17-19, 61. 1932.
The author tells how to measure recklessness, and mentions some of the marks of recklessness.
(154) WHY THEY DRIVE THAT WAY. Natl. Safety News 29 (4): 15-18, illus. 1934. Also in Pub. Safety 8 (4): 14, 32, 34, 1934.
Detailed aspects of psychological traits related to safety; nature of at- tention; "subconscious mind"; intellectual and emotional factors; patho- logical conditions.
LODGE J E (155)
FATAL SMASH-UPS PROVE CARS SAFE—DRIVERS RECKLESS: THIS ARTICLE TELLS HOW POOR DRIVERS HAVE INCREASED MOTORING HAZARDS DESPITE IMPROVED ROADS AND CARS. Pop. Sci. Monthly 120 (5): 52-53, 124, illus. 1932.
MACAULEY, P. S. (156) TRAFFIC'S WORST OFFENDERS CONSTITUTE ONLY SMALL GROUP—RESEARCH ON ACCIDENTS INTRIGUES UNDERWRITERS. Weekly Underwriter 132: 160, 162. 1935.
Résumé of the findings of Holger Jensen, safety engineer, Maryland Casualty Co.
McClintock, Miller, (157)
BAD ROAD MANNERS MATERIALLY REDUCE EFFICIENCY OF HIGHWAYS. Roads and Streets 75: 500. 1932.
MARSH, D. L. (158)
ETHICS OF THE HIGHWAY: TEN COMMANDMENTS FOR MOTORISTS. Natl. Safety News 21 (6): 12, 102–103. 1930. Also in Safety Engin. 59: 243–244. 1930.
Given before the 9th annual State safety conference of the Massachusetts Safety Council.
MARTIN, R. E. (159)
ARE YOU FIT TO DRIVE YOUR CAR? YES, IF YOU ARE PROPERLY TRAINED, SAYS PSYCHOLOGIST, FOLLOWING REMARKABLE TESTS. Pop. Sci. Monthly 116 (4): 55-56, illus. 1930.
Describes Dr. Knight Dunlap's tests for the National Research Council, which were made under the immediate direction of Prof. A. P. Weiss, director of the psychological laboratory of the Ohio State University.
MASSACHUSETTS STATE COLLEGE, PSYCHOLOGICAL LABORATORY. (160)
A RESEARCH ON SCIENTIFIC INVESTIGATION OF DRIVING SKILL, SEPTEMBER 1934 TO AUGUST 1935. 51 pp., illus. Amherst, Mass. 1935. [Mimeographed.] (FERA Proj. XS-F2-U25).
MAURER, I. J. (161) CAREFUL DRIVERS ARE SURVIVORS. Safety Engin. 72: 35-36. 1936.
Plan for greater highway safety: 1, Driver's license; 2, Driver's record entered on driver's license; 3, Centralized State bureau to which all accidents are reported.
NATIONAL SAFETY COUNCIL, INC. (162)
A CLASSIFICATION OF PERSONAL CAUSES OF TRAFFIC ACCIDENTS. Rev. ed., 4 pp. Chicago, Ill. 1935. (Natl. Safety Council, Pub. Safety Memo. 11). [Mimeographed.]
(163) TOO LONG AT THE WHEEL: A STUDY OF EXHAUSTION AND DROWSINESS AS THEY AFFECT TRAFFIC ACCIDENTS. 48 pp., illus. Chicago, Natl. Safety Council. c1935.
Accidents due to fatigue and loss of sleep; why people drive until they fall asleep; other aspects of driving when drowsy; legislation on hours of duty; enforcement of regulations limiting hours on duty; researches on

fatigue. A second report supplementing this report gives quantitative facts on how long drivers were on the road before they fell asleep at the wheel and is now available under title "How Long at the Wheel" 31 pp., illus. Chicago, Natl. Safety Council. c1937.

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NERLOVE, S. H., and GRAHAM, W. J.

THE TREND OF PERSONAL AUTOMOBILE ACCIDENTS. JOUR. Business 1: 174-201, illus. 1928.

Mounting course of automobile fatalities and automobile nonfatal injuries; automobile fatalities and nonfatal injuries related to population and automobile registrations; automobile fatality statistics.

NEWTON, G. D.

MILLIONS HAVE BEEN AVAILABLE FOR SAFE ROADS, BUT PRACTICALLY NOTHING FOR SAFER DRIVERS. Travelers Standard 22: 141-160, illus. 1934.

Talk before semiannual meeting of the Eastern Conference of Motor Vehicle Administrations, New York, May 17-18, 1934.

OLMSTEAD, F. R.

A STUDY OF FACTORS INFLUENCED BY AUTOMOBILE BRAKE-REACTION TIME. Mich. Univ. Conf. Highway Engin. Proc. 22: 16-27, illus. 1936. Abstract in Mich. Roads and Construct. 33 (11): 3. 1936.

The author mentions design of brake-reaction testing equipment; reaction time; age, driving experience, driving speeds, education, and reaction time.

RUSSELL, FREDERICK.

MISBEHAVING MOTORISTS: A CONSIDERATION OF THE HUMAN ELEMENT AND ITS RELATION TO THE MOTOR VEHICLE ACCIDENT PROBLEM. Touring Topics 23 (1): 38-41, 56, illus.; (2): 44-47, 50, illus. 1931.

SMITH, A. W.

PSYCHOLOGY AND ROAD TRANSPORT DRIVER. JOUR. Inst. Transport 16: 239-243. 1935.

Paper, read before the Birmingham and District Section on December 11, 1934, gives details of tests designed to measure both actual and potential ability of driver.

SMITH, P. H.

WHO'S A GOOD DRIVER? OPINIONS DIFFER . . . TESTS TELL . . . THE HUMAN EQUATION MUST BE SOLVED . . . EGOTISM SOLVED BY TRAINING . . . PRIVILEGES FOR SUPERIOR DRIVERS? Sci. Amer. 155: 133-135, illus. 1936.

Bureau of Street and Traffic Research at Harvard University has a comprehensive group of instruments and tests. So far, seven tests have been developed.

SOLOSTH, R. E.

THE EYES HAVE IT. THE HUMAN EYE AND MOTORING. Ariz. Highways 11 (7): 14, 27; (9): 11, 22. 1935.

Good sight is imperative to cut accident toll.

STOECKEL, R. B.

THE CARDINAL RULES OF GOOD DRIVING. Conn. Dept. Motor Vehicles Bull. 86, 6 pp., illus. Hartford. 1932.

"Maintain reasonable sustained speed on the right—Operate with knowledge of width of highway—Pass cars ahead only at proper places— Exercise care at curves, on hills, and at 'blind' spots—Keep equipment in good order at all times."

DISCRIMINATING DISCIPLINE FOR DRIVERS. Conn. Dept. Motor Vehicles. Bull. 89, [7 pp.] Hartford. 1932.

"Proposal for separate treatment of motor vehicle law offenders, discusses—More severe penalties for intentional law-breakers and study of inadvertent violators on basis of competence urged—Relief for courts and improved justice for unwitting motorists in misbehavior hailed as benefits of new plan."

PROBATION SYSTEM FOR MOTOR VEHICLE LAW VIOLATORS. Conn. Dept. Motor Vehicles Bull. 80, 4 pp. Hartford. 1931.

State supervision over driving performance of accident repeaters and serious offenders proposed; not to be established as a punishment, but as an educational measure and for correction of bad driving habits; department inspectors in various parts of Connecticut to serve as probation officials.

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SWIFT, W. J.

THE DRIVER'S PHYSICAL INVENTORY. Natl. Safety News 33 (2): 29, 70. 1936. Motor-coach operation calls for drivers of the highest type-physically and mentally.

- ULLMAN, WILLIAM.
 - (175)WHY DO YOU PASS THE OAR AHEAD? Westways 26 (7): 21, 34. 1934.

"Not the 'competitive spirit', nor the desire to 'show off' your own and your car's powers, but just mental laziness, is the main reason why drivers hate to stay behind."

UNITED STATES DEPARTMENT OF AGRICULTURE, BUREAU OF PUBLIC ROADS. (176)DRIVE SAFELY. [By William G. Eliot, 3d] 4 pp., illus. Washington, U. S. Govt. Print. Off. 1936.

First responsibilities; general rules of the road; special traffic rules; other aids to safe driving; speed.

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SPEED

ANONYMOUS.

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BENT, SILAS.

SPEED ON THE HIGHWAYS; A STUDY OF THE AUTO AND ITS SAFETY PROBLEM. Current Hist, 45 (3): 95-99. 1936.

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THE OCEAN ACCIDENT AND GUARANTEE CORPORATION, LTD. (193) CONTROLLED SPEED. [20] pp., illus. New York. c1932.
"While some criticism may be justly leveled at the design of modern motor vehicles and the highways on which they travel, it is, nevertheless, true that traffic accidents are the direct responsibility and problem of the individual driver. This booklet has been written with the hope that it will help you to successfully meet this all-important problem."—Foreword.
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CONTROL OF SPEED OF MOTOR VEHICLES. East. Conf. Motor Vehicle Adminrs. [Addresses] [New York City] 1935: 1-9. 1935.
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SIMPSON, R. E. (196) TWENTIETH CENTURY SPEED PLUS NINETEENTH CENTURY VISIBILITY. Safety

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Tests are given on the "drunk detector" an apparatus through which the subject looks at a series of slides.
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BLACK, B. W. (208)
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(210)FAILLE, J. B. DE LA. ALCOHOL EN SNELVERKEER. De Auto [Netherlands] 33: 318-320. 360-362. illus., 392-394, 1936. Pt. 7. Alcohol and traffic safety. Pts. 1-6 are published in the December 14, 20, 27, 1934, and January 17. April 4 and 16, 1935, issues. Not examined. (211)FLATG. J. ALKOHOL UND VERKEHRSUNFÄLLE. Verkehrstechnik 17: 57-58. 1936. Alcohol and traffic accidents. (212)GREENBERG, DAVID. THE DRUNKEN DRIVER. East. Conf. Motor Vehicle Adminrs. [Addresses] [New York City] 1935: 42-46. 1935. [Mimeographed.] Definition, classification, and recognition of intoxication, and the presentation of the medical findings to the court. HANSON, J. W. (213)UNLICENSED, RECKLESS AND DRUNKEN AUTO DRIVERS ARE CHIEF OFFENDERS. Maine Highways 1 (9): 10-11, 20. 1932. The chief of the highway police reveals the work and needs of his department in his annual report. HEISE, H. A. (214)HAS HE BEEN DRINKING? Natl, Safety News 30 (6): 19-20. 1934. References, p. 20. "When scientific methods replace personal judgment in sobriety tests, our statistics on alcohol and accidents will be much more reliable.' LAUER. A. R. (215)SPEED DEMANDS SOBRIETY. Natl. Safety News 30 (4): 33-34, 78-80, illus. 1934. Increased speeds demand competent driving; alcoholic indulgence is a dangerous distraction for any motorist. LAZENBY, A. D. (216)ROLE OF ALCOHOL IN THE CAUSATION OF AUTOMOBILE ACCIDENTS AND ITS SIGNIFICANCE IN CLAIM ADJUSTMENT. Weekly Underwriter 131: 796, 801. 1934. Bibliography, p. 801. Influence of alcohol; solace and curse; alcohol effect; evidence of intoxication. MARSH, B. W. (217)PROGRESS IN STUDY OF DRUNKEN DRIVING. Natl. Research Council, Div. Engin. and Indus. Research, Highway Research Bd. Proc. (1934) 14 (pt. 1); 383-387, 1935. Lists methods generally used to determine whether or not the driver is under the influence of intoxicating liquor. MILES, W. R. (218)ALCOHOL AND MOTOR VEHICLE DRIVERS. Natl. Research Council, Div. Engin. and Indus. Research, Highway Research Bd. Proc. (1933) 13 (pt. 1): 362-381, 1934. Bibliography, pp. 375-379; discussion, pp. 379-381. Effects of alcohol on drivers; one third accidents partially due to alcohol; determination of percentage of alcohol in blood or urine by biochemical means as basis for court action. NEW YORK (CITY) COMMITTEE TO RECOMMEND IMPROVED METHODS FOR DEALING WITH AUTOMOBILE DRIVERS UNDER THE INFLUENCE OF INTOXICATING LIQUOR. (219)REPORT. To Hon. Fiorello H. LaGuardia, Mayor. [17 pp.] New York. N. Y. [1936] [Mimeographed.] Includes proposed amendments: (1) An Act to amend the vehicle and traffic law in relation to operating motor vehicles while under the influence of intoxicating liquor; (2) An Act to amend sections 940 and 943 of the Code of Criminal Procedure in relation to persons who operate motor

vehicles or motor cycles while under the influence of intoxicating liquor.

SCHEUBLEIN.

ALKOHOL UND KRAFTVERKEHR. Verkehrstechnik Heft, 6, pp. 142, 1933.

Discussion of traffic accidents resulting from drunkenness in Munich.

STOECKEL, R. B.

(221)DRINK . . . AND TRAFFIC ACCIDENTS. Pub. Safety 9 (4): 19, 38, 1935.

The author thinks that the shoe should be put on the other foot. A policeman instead of being required to prove that the operator was "under influence of liquor" would simply produce evidence to satisfy the judge that the operator had something to drink and had subsequently operated a car. (222)

THE ENFORCEMENT PROBLEM. Police Jour. 21 (7): 11-13. 24. 1935. A discussion of drunken driving.

UNITED STATES CONFERENCE OF MAYORS.

DRUNKEN DRIVING. 12 pp. Washington Mayors Rept. 109). [Mimeographed.] Washington, D. C. 1936 (U. S. Conf.

"The present survey, for which 102 large cities furnished data for 1935, is an attempt to show the extent of the problem in various municipalities and the means used to test intoxication and punish guilty drivers."-Introduction

WINDELS, PAUL, Cox, O. S., and LEHRICH, F. W. (224) MEMORANDUM OF LAW ON OPERATING MOTOR VEHICLES WHILE UNDER THE INFLUENCE OF INTOXICATING LIQUOR. Submitted to Hon. Fiorello H. La Guardia, Mayor of the City of New York . . . approved by the Chief City Magistrate and printed for distribution to the City Magistrates of the City of New York. 22 pp. [New York.] [1935.]

MOTOR-VEHICLE EQUIPMENT

ANONYMOUS.

THE DRIVER IS PART OF THE MACHINE TOO: THE ANATOMICAL FACTOR IN VEHICLE CONTROL, A SUBJECT NEGLECTED BY SOME MANUFACTURERS. By "Duodecimus." Motor Transport 62 (1623): 22, illus. 1936.

Human leverage system must be relieved of all initial stresses and be ready for instant action when we sit behind the wheel in a properly balanced position.

SAFETY LAWS BECOMING EFFECTIVE IN 1935. Safety Engin. 69: 24. 1935. Several States have passed laws requiring safety-glass protection in all new vehicles.

ANDREWS, GEORGE.

FAULTY MECHANISM CAUSE OF MANY ACCIDENTS. Street Accidents 2 (8): 4-5, illus. 1932.

From a lecture in the Police Academy Course in Traffic and Street Safety for Commercial Fleet Operators, New York City. Inadequate brakes and defective signaling device are given as some of the causes.

BRENNAN, J. F.

MECHANICAL DEFECTS IN MOTOR VEHICLES. Street Accidents 2 (6): 4-5, illus. 1932.

From a lecture in the Police Academy Course in Traffic and Street Safety for commercial fleet operators, New York City. Faulty brakes, lights and signals, and skidding are listed.

CARRUTHERS, A. C.

DEFECTIVE TIRES, AN ACCIDENT CAUSING HAZARD. Safety Engin. 66: 49-50, illus. 1933.

Editorial, p. 41.

DICKINSON, H. C.

VEHICLE AND HIGHWAY MECHANICS AS RELATED TO TRAFFIC. Natl. Research Council, Div. Engin. and Indus. Research, Highway Research Bd. Proc. (1930) 10: 226-232. 1931.

Headlighting, right of way, overtaking and passing, mechanics of steering, and vehicle brakes are discussed.

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HALSEY, M. N.

RELATIONSHIP BETWEEN AUTOMOBILE CONSTRUCTION AND ACCIDENTS. JOUR. Soc. Automotive Engin. 30: 254-259. 1932.

Characteristics of automobiles are partly responsible for accidents. The author also discusses visibility from driver's seat, aids to steering safety. braking-system improvements, and fire-hazards and air pollution inside car.

SAFETY STANDARDS FOR AUTOMOBILE CONSTRUCTION AND MAINTENANCE. Indus. Standardization 3: 265-283, 1932.

An analysis of causes of accidents due to faulty construction, design, or maintenance, and proposals for improvements.

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WHEN YOU BUY & CAR. Natl. Safety News 25 (5): 12-13, 68, 70, 72. illus. 1932.

Abstract of a paper read before the 10th Annual Midwest Safety Conference.

Helpful check list of safety features desirable in automobile; more manufacturers will adopt them when public demand becomes insistent.

HOFFMAN, P. G.

AUTOMOBILES SAFELY BUILT, CARELESSLY DRIVEN. Safety Engin. 69: 219-220: 254 1935.

Address delivered before the 6th annual Greater New York Safety Conference, March 5, 1935.

Data pertain to improved brakes, steering mechanism, headlights, safety glass, etc. Automobiles carelessly driven are the cause of majority of accidents. Enforcement procedure is given.

KILLICK, V. W.

SOME PRIMARY CAUSES OF AUTOMOBILE ACCIDENTS. Jour. Soc. Automotive Engin, 29: 470-473, 1931, Abstract in Mech. Engin, [New York] 54: 505. 1932

Largest groups of accidents are collisions at highway intersections and railroad crossings. Primary cause of these collisions is obstruction of drivers' vision by left front body-pillar or windshield corner post, by narrow windows, height of side window from floor, and low front seats.

KING, F. G. W.

TYRE FACTORS IN VEHICLE CONTROL. Engineering [London] 140: 467-470, illus. 1935.

Contribution to joint discussion on "The Application of Science to the Control of Road Traffic," before Sections G and J of the British Association at Norwich on Tuesday, September 10, 1935. Abridged.

The author shows to what extent tires are associated with accidents, braking, and stopping distances.

KLEMIN, ALEXANDER.

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ARE MODERN CARS SAFE? THE DRIVER IS USUALLY TO BLAME . . . ENGINEERING DEVELOPMENTS PROMOTE SAFETY AND COMFORT . . . HOW STREAMLINING FITS INTO THE SCHEME OF THINGS. Sci. Amer. 155: 61-64, illus. 1936.

MITTE, E. A.

NECESSARY SAFETY EQUIPMENT ON MOTOR VEHICLES. Mich. Univ. Conf. Highway Engin. Proc. 16: 180-183. 1930.

Brakes, horns, mirrors, windshield wipers, and lights are listed as necessary safety equipment.

MOYER, R. A.

SKIDDING CHARACTERISTICS OF AUTOMOBILE TIRES ON ROADWAY SURFACES AND THEIR RELATION TO HIGHWAY SAFETY. Iowa Engin. Expt. Sta. Bull. 120, 128 pp., illus. Ames, Iowa. 1934. Abstract in Natl. Research Council, Div. Engin. and Indus. Research, Highway Research Bd. Proc. (1934) 14: 123-130. 1935.

References, pp. 126-128.

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MOYER, R. A.

SKIDDING CHARACTERISTICS OF AUTOMOBILE TIRES, ETC.-Continued.

"The relative importance of skidding as a cause of highway accidents was determined from a study of highway accident statistics for Iowa and Connecticut. Coefficients of friction for new tread and smooth tread tires on wet and dry surfaces were measured for both straight ahead and sideways skidding at speeds of 3 to 40 miles per hour using a two-wheel trailer test unit."-page 6.

NATIONAL HIGHWAY USERS CONFERENCE.

EQUIPMENT REQUIREMENTS FOR MOTOR VEHICLES: A COMPILATION OF PROVISIONS OF MOTOR VEHICLE LAWS AND OFFICIAL RULINGS PRESCRIBING MANDATORY EQUIPMENT IN THE SEVERAL STATES AND THE DISTRICT OF COLUMBIA. AS OF JANUARY 1, 1936, 127 pp. Washington, D. C. 1936, (Highway Users Ser. L3.)

OEHLER, G.

(241)MITWIRKUNG FALSCH EINGESTELLTER BREMSEN BEI KRAFTFAHREZEUGENFÄLLEN AUF SCHLÜPFRIGER STRASSE. Verkehrstechnik no. 8, pp. 196-197, 1934.

General discussion of accidents which may be traced to characteristics of car and extent to which slippery roads affect safety of cars. The effect of incorrectly adjusted brakes in automobile accidents is shown.

OLEN. W. A.

EFFECTS OF FRONT-WHEEL STABILITY ON PUBLIC SAFETY. JOUR. Soc. Automotive Engin. 34: 92-100. 1934.

Discussion, pp. 96-100.

"After submitting evidence to show number and character of highway accidents involving motor vehicles, Mr. Olen points out that there are many factors that affect front-axle stability of a vehicle and goes on to discuss the relation of these factors to public safety on highways. He presents the results of tests comparing the effort required on a four-wheel-drive and two-wheel-drive truck on smooth, dry pavement, as well as test data bearing on various other phases of front-axle stability."-page 92.

Roos. D. G.

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SAFETY A PRIME FACTOR IN MOTOR CAR DESIGN. Amer. Highways 16 (1): 15-17, 1937.

Address before the American Association of State Highway Officials, Annual Convention, San Francisco, December 1936.

Materials, bodies, electric starting, steering, tires, riding comfort, noise and vibration, and brakes are discussed.

VAN DEVENTER, F. M.

(244)CARBON MONOXIDE IN MOVING VEHICLES. Jour. Soc. Automotive Engin. 37: 822-327, illus. 1935. Abstract in Automotive Indus. 72: 371, 1935, under title "CO Poisoning Held to be Real Cause of Many 'Sleeping Driver' Accidents."

Paper presented before the Metropolitan Section Meeting, Society of Automotive Engineers, New York City, March 11, 1935.

"This paper reports upon the results of a highway investigation which justifies the conclusion that carbon monoxide in exhaust gases can and does seep into the passenger compartments of moving vehicles in sufficient quantities to impair the judgment of the driver in the control of his car; analyzes the cause factors resulting in the existence of carbon monoxide within cars; and recommends a form of inspection and maintenance which will effectively reduce, if not eliminate, this hazard to public safety."-page 322.

WHEELER, J. W.

(245)

THE NEED OF CO-ORDINATION BETWEEN THE AUTOMOBILE AND THE HIGHWAY. Assoc. Highway Off. North Atlantic States Proc. 12: 33-38. 1936.

The author discusses operation of the vehicle, how the length of vehicle governs its turning radius, question of lights, speed, and skid resistance.

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ACCIDENT PREVENTION

GENERAL DISCUSSIONS

ANONYMOUS.

THE AUTOMOBILE-ACCIDENT "BUSINESS." Travelers Standard 24: 121-127, illus. 1936.

Discusses statistics, causes, and cost in dollars, and advocates strict enforcement of traffic laws, with suitable and certain penalties for violations.

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CAUSES AND PREVENTION OF ROAD ACCIDENTS. INSTITUTION OF MUNICIPAL AND COUNTY ENGINEERS' REPORT: COUNCIL'S SUGGESTIONS. Surveyor and Munic. and County Engin. 87: 569-570. 1935.

The following topics are mentioned: roads, footways, traffic lights, motor and other vehicles, cyclists, pedestrians, and school children.

(248)

COURTESY ON THE ROAD: DOES IT TEND TO PREVENT AUTOMOBILE ACCIDENTS? Travelers Standard 18: 121-130, illus. 1930.

Right of way, straight driving, cutting in, keeping up with the procession, hand signals, and headlights are listed as factors in courtesy.

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DEATH TAKES NO HOLIDAY: NEW SAFETY FILM TO HAVE CONVENTION PREMIER. East. Underwriter 36 (34): 31, illus. 1935.

Tells dramatic accident-prevention story.

(250)

A QUICK DRIVER RATHER THAN A SPEEDY CAR. Amer. City 39 (3): 139-140. 1928.

Large element in relation of speed to safety is ability to bring a car to a stop within a short distance; and while on the one hand more rapid acceleration is featured in some automobile advertisements, on the other importance of good brakes and adequately frequent testing thereof are receiving increased attention.

(251)

ROAD ACCIDENTS: THEIR CAUSES AND PREVENTION. HIGHWAY ENGINEERS' RE-SPONSIBILITY: SPEED OF VEHICLES: SLIPPERY SURFACES: TRAFFIC CONTROL. SURVEYOR and Munic. and County Engin, 84: 507-508. 1933.

Discussion at meeting of Yorkshire District, Institution of Municipal and County Engineers, at York, November 1933.

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- ROAD SAFETY, OUR THIRTY POINTS. PRACTICAL RECOMMENDATIONS FOR LESSEN-ING THE NUMBER OF ACCIDENTS. MOTOR TRANSport 58 (1509): 9, 15. 1934.

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veilligheid voor Alles! De Auto [Netherlands] 32: 1643-1646, illus., 1935; 33: 1635-1638, illus., 1936.

Traffic safety is regarded as most important.

WHAT 31 STATES ARE DOING IN ACCIDENT PREVENTION, VERY INTERESTING RE-PORTS FROM DIFFERENT STATES. Nation's Traffic 2 (8): 16-17. 1928. Also in Fla. Highways 5 (11): 10-12. 1928.

Information is based on answers to circular letter sent to the various State highway departments.

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YES, THROUGH STREETS WILL REDUCE ACCIDENTS, BUT THEY MUST BE PROPERLY SAFEGUARDED AND SUPERVISED OR THEY MAY BECOME AN ACCIDENT MENACE. Pub. Safety 6 (9): 27, 33. 1931.

Study of the accident experience before and after making Compton Avenue in St. Louis a through street.

26

AMERICAN ELECTRIC RAILWAY TRANSPORTATION AND TRAFFIC ASSOCIATION, COM-MITTEE ON MOVEMENT OF THE VEHICLE. (258)TRAFFIC INTERFERENCE OVER WHICH TRANSPORTATION OFFICIALS DO NOT HAVE Amer. Elect. Ry. Transportation and Traffic Assoc. Proc. 24: CONTROL 159-183 1931 Discusses traffic capacity of streets; various number of lanes; loading zones and platforms; signals, parking; taxicab parking and cruising; through stop streets; use of literature. Gives experiences and comments of various electric railroads. BABCOCK, C. M. (259)WELL-TRAINED MOTORCYCLE PATROLMEN URGED AS TRAFFIC ACCIDENT CURB. Amer. City 39 (4): 21, 1928. Visible presence of uniformed officer on highway has very marked effect. on reckless drivers. BAKER, J. S. (260)HIGHER THE SPEED THE WORSE THE ACCIDENT. Pub. Safety 6 (2): 6-8, illus. 1932 As high speeds increase the seriousness of accidents, the reduction of speed immediately presents itself as a measure for saving lives. (261)BARBER, A. B. NATION-WIDE MOVEMENT FOR BETTER STREET AND HIGHWAY TRAFFIC. Roads 72: 158. 1929. Good Abstract of an address on the presentation of the Anthony N. Brady Memorial Medals, New York City, January 4, 1929. Uniform vehicle-operation rules and uniformity are needed in Northeastern States. (262)BARSANTEE, HARRY. SAFETY ACTIVITY AT HIGH PEAK IN 1934. TRAFFIC ACCIDENT PREVENTION WORK HAS ITS BUSIEST YEAR. Pub. Safety 9 (2): 16-18. 1935. BICKELL, J. P. (263)RECOMMENDATIONS FOR HIGHWAY SAFETY. Canad. Good Roads Assoc., Proc. 18: 10-24. 1931. Also in Canad. Engin. 61 (13): 91-92. 125-127. 134: (15): 19, 45. 1931.Discussion, pp. 8-24. Uniformity in motor vehicle and traffic laws is desirable; there should be a safety-responsibility law. (264)SAFETY ON HIGHWAYS. Canad. Engin. 68 (9): 68-71, 1935. (Ontario Road Convention number.) Validity of local legislation; multiplicity of signs; designating a through highway; illumination of highways necessary; resolution on highway safety. BILLINGS, CURTIS. (265)ACCIDENTS DON'T HAPPEN. Atlantic Monthly 149: 694-700. 1932. Accidents are caused, and causes can be eliminated by engineering. enforcement, and education. (266)AUTO ACCIDENTS CAN BE REDUCED. JOUR. Amer. Ins. 13 (5) : 15-17, 27, illus. 1936. Gives a brief résumé of industrial safety movement to show how complicated is the prevention of work accidents—and how perplexed and hazy accidents must be on our streets and highways. (267)

AUTOMOBILE ACCIDENT PREVENTITIS. Jour. Amer. Ins. 13 (9): 11-13, 24. illus. 1936.

Author discusses devices recommended to prevent accidents and to control accident-prone drivers.

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BILLINGS. CURTIS.

THE TOLL OF DEATH ON STREETS AND HIGHWAYS. Current Hist. 34: 570-573. 1931.

Advances have been made in three general directions—engineering, education, and enforcement. Of the three groups the engineers have progressed furthest. Author describes several interesting experiments that have been undertaken by each of these groups.

BOGAN, R. A. L.

HIGHWAY ACCIDENTS ARE AVOIDABLE. JOUR. Soc. Automotive Engin. 34 (4): 13-14 illus. 1934.

Paper presented at the annual meeting of the Society of Automotive Engineers, Detroit, January 1934.

Fewer accidents in States that require driver's license.

BRANDT, A. W.

ANNUAL CONVENTION ADDRESS BY THE PRESIDENT OF THE ASSOCIATION. Amer. Highways 15 (1): 1-5. 1936.

Accidents on highways, pp. 3-4.

BROWN, J. H.

HIGHWAY SAFETY. Amer. Road Builders' Assoc. Proc. 25: 25-30. 1928.

The author discusses courtesy and vigilance, highway safety club, psychological effect of a pledge, and safety on our highways.

BUDLONG, R. W.

CHICAGO ACCIDENT PREVENTION BUREAU USES CAMERA EFFECTIVELY. East. Underwriter 34 (8): 38. 1933.

Plan of organized police action to get quick evidence on auto accidents first used in Evanston, Ill., is now being adopted by other cities.

BURKE, T. A.

HERE'S HOW MILWAUKEE DID IT. Pub. Safety 9 (5): 16-19, illus. 1935.

Modern engineering, extremely effective, although not always conventional; intensive and continuous educational work; strict and impartial, but fair, enforcement of traffic laws; fine safety salesmanship; remarkable cooperation; a substantial, "property-minded" citizenship.

BURNHAM, H. C.

HOW RHODE ISLAND REDUCED ITS HIGHWAY DEATH TOLL. Pub. Safety 5 (5): 6-7, 30, illus. 1931.

"Individual discussion with the Board's Hearing Officers is an important factor in teaching drivers to respect the safety of others."

BUTTERWORTH, WILLIAM.

WHAT SHALL WE DO ABOUT TRAFFIC? Nation's Business 17 (2): 132, 135-136, 138, illus. 1929.

"We need uniform laws and having obtained these we must enforce them."

CAMP, E. V.

HIGHWAY GUARD RAIL ECONOMIES. Nation's Traffic 3 (3): 14-16, illus. 1929. Paper presented at Southeastern Road Builders Conference, Jacksonville.

Fla., March 1929.

Ability to prevent personal injury and ability to prevent damage to vehicles are mentioned.

CARRUTHERS, A. C.

TIRE MAN'S OPPORTUNITY TO PROMOTE SAFE DRIVING. Safety Engin. 70: 49-50. 1935.

"Especially prepared for Goodyear Tire and Rubber Company Safety Meetings."

COLE, WILLIAM.

PUBLIC SAFETY ON OUR STATE HIGHWAYS. Motor Transportation 4 (4): 7-9, 34, 1929.

"... that government not so much by centralized authority but government by stimulation of individual and community responsibility and education to intelligent action, is wherein, if not absolute control, satisfactory regulation of traffic on public highways can be accomplished."

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Cox. W. J.

AUTOMOBILE HAZARD IN CITIES AND ITS REDUCTION. Amer. Soc. Civ. Engin. Trans. 92: 1-62, illus. 1928. Abstract in Amer. City 37 (2): 207-209. 1927

Discussion, pp. 28-62.

Variation expressing the personal injury hazard of automobile operation as proportional to population density; "traffic segregation": street plan: motor-vehicle legislation.

DALTON, S. J.

STREET AND HIGHWAY SAFETY. Miss. Highways 3 (8): 6-8, 1934.

Discusses highway engineering and education. Effort should be made to make everyone not only safety minded but safety conscious.

DARCY. J. J.

PREVENTION OF HIGHWAY ACCIDENTS. Civ. Engin. 5: 154-157, illus. 1935.

Design of grade separations; function of traffic lights and signals; superresearch organization, "Highways, Inc.," needed for group study of all problems relating to highways construction, and dissemination of conclusions

DE GLOPPER, M.

PUBLIC RELATIONS OF HIGHWAY DEPARTMENTS. Mich. Univ. Conf. Highway Engin. Proc. 18: 133-140. 1932.

Relates mostly to obligation of highway staff to make roads safe for public, and recommends attitude that public is always right.

DE KRUIF. PAUL.

A MILWAUKEE DEATH FIGHT, IF THE REST OF THE COUNTRY HAD DONE AS WELL IN 1934 THE TRAFFIC DEATH RATE WOULD HAVE BEEN NOT 36,000 BUT 13,800. Ladies' Home Jour. 52 (9): 18-19, 58-60, illus. 1935.

DREWNIAK, J. B.

COURTESY KEYSTONE OF TRAFFIC SAFETY OFFICIAL DECLARES. Badger Highways 5(2): 17-19, 1929.

How to promote safety, "bawling him out", courtesy to officers, and nervous drivers are discussed.

EATON. R. W.

SUPERVISION AND CONTROL OF SPEED IN MUNICIPALITIES WITH SPECIAL REFER-ENCE TO STATE HIGHWAYS TRAVERSING THEM. Inst. Traffic Engin. Proc. 6: 10-21, illus. 1935. [Processed.]

Discussion, by Burton W. Marsh and William G. Eliot. 3d, pp. 17-21.

Supplement, pp. 15-17, contains instructions for observations and records of speeds.

Speed "too high for conditions" is a major cause of motor vehicle accidents.

ECKELS, SAMUEL.

TRAFFIC-SAFE ROAD IS TO-DAY'S TASK. Engin. News-Rec. 106: 4-6. 1931.

Inaccurate accident statistics are handicap to solution; safety must be built into road; regulation must assist safe construction and maintenance; highway deaths growing rapidly; Pennsylvania's accident record for 1929 is given; curves and grade are shown to promote accidents.

EYNON, B. G.

HAVE WE FORGOTTEN "THREE C'S"? Natl. Safety News 26 (3, pt. 1): 21-22, 68-69. 1932.

Abstract of an address before the drivers' school of the Milwaukee Safety Commission.

The familiar "three E's" of traffic safety are important but let us have more of the three C's-courtesy, consideration, and cooperation. (288)

FENNER, D. C.

MY VIEW OF THE HIGHWAY SAFETY PROBLEM. Nation's Traffic 2 (11): 34-35. 1929.

Paper delivered before the Springfield, Mass., Safety Council meeting touches on the needs of bridges, tunnels, etc., in solving transportation developments.

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(289)FISH. C. T. DETROIT APPLIES THE FACTS AND GETS RESULTS IN THE REDUCTION OF MOTOR VEHICLE ACCIDENTS. Natl. Safety News 19 (3): 17-20, illus. 1929. Traffic and public safety activities of the police department: traffic engineering; Detroit Automobile Club; public schools. (290)FORTNEY, B. B. RESTRICTED PRIVILEGE-THE KEY TO HIGHWAY SAFETY. Safety Engin. 65: 121-122, illus, 1933. (291)GABOURY. ARTHUR. SAFETY ON THE HIGHWAYS. Canad. Good Roads Assoc. Proc. 21: 44-47. 1934. Abstract in Canad. Engin. 67 (12): 60. 1934. The author discusses the cyclist delivery boy, horse-drawn-vehicle driver, and the speed maniac. Education is the only sure cure for highway disorder. (292)GILMORE, C. E. SAFETY FIRST. Tex. Highways 1 (9): 26-29, illus. 1928. Illustrations show correct and incorrect ways of driving. (293)GOEBEL, KARL STRASSENVERKEHRSUFÄLLE UND IHRE BEKÄMPFUNG. Verkehrstechnik 17: 563-567, 1936. Road traffic accidents and means of combating them. (294)GOTTER. H. M. DETROIT CONTINUES ITS TRAFFIC EXPERIMENTS. Amer. City 40 (4): 145-146. illus. 1929. Safety-zone problem; skull and crossbones and "The Rubber Lady" rubber safety sign; lighting the alleys; warning signals at crossings. GRANT. R. H. (295)THREE SCOTS AND A HIGHWAY. TOday 7 (4): 12-13, 16-17, illus. 1936. The three Scots are John Loudon Macadam, Thomas H. MacDonald, and Dr. Miller McClintock. (296)GREEN, P. L. ACCIDENTS CAN BE REDUCED. Amer. City 50 (10): 71, 73, 75, 77; (12): 69, 71. 1935. The Institute of Traffic Engineers asked How? Recognized experts answered. Answers to the urban problem are given in no. 10, on the pages indicated; and answers to the rural problem are given in no. 12. GREENSHIELDS, B. D. (297)DISTANCE AND TIME REQUIRED TO OVERTAKE AND PASS CARS. Natl. Research Council, Div. Engin. and Indus. Research, Highway Research Bd. Proc. (1935) 15: 332-342, illus. [1936] Discussion, pp. 341-342. "The results of this investigation are based upon study of 7,500 cars whose behavior was recorded by the photographic method described in Volume 13, Proceedings, Highway Research Board. The study was confined largely to two-lane highways where the traffic density varied from 200 to 1.300 vehicles per hour. In addition to the analysis of the photographic data, the paper presents a mathematical analysis of the speed and spacing of motor vehicles." (P. 332). HARRISON, H. H. (298)HIGHWAY OFFICIALS' OBLIGATION TO MOTOR TRAFFIC. Miss. Valley Conf. State Highway Depts. [Papers] 27: 79-84. 1935. Facilities for safe operation of motor vehicles is not enough, the highway officials must accept some responsibility for the conduct of drivers who are privileged to use the highways. HAVILAND, J. T. (299)WAR ON THE HIGHWAYS. Jour. Amer. Ins. 13 (11): 23-24. 1936.

Excerpts from an address delivered before the National Association of Mutual Insurance Companies, 41st annual conference, 1936. Speed and driver are the two most important elements.
HOFFMAN, H G

BATTLING TRAFFIC ACCIDENTS IN NEW JERSEY. Pub. Safety 5 (7): 6-8 illus. 1931.

Clear up irregularities, use training manual, and educate children and adults.

HOFFMAN, P. G.

(301)ENGINEERING ISN'T ENOUGH. Natl. Safety News 33 (6): 17-18, 58, 1936. From an address before the 15th annual Midwest Safety Conference.

We need better highways, but accident reduction cannot wait for them. Better driving will produce immediate results.

(302)HIGHWAY SAFETY-THE NEW DYNAMIC. Safety Engin. 72: 163-164, 166. 1936. Address delivered to the Western States Safety Conference, Salt Lake City. Utah.

Lists important objectives, needs for accomplishing objectives, and national organizations.

HOFFMAN, REYBURN.

TRAFFIC ENGINEERING FOR SAFETY AND CONVENIENCE. Natl. Safety News 18 (1); 27–28. 1928.

Before the Central States Safety Congress, Kansas City, Mo., April 24, 1928.

Segregation by time intervals; comprehensive plans needed; isolated signals ignored; when left turns are safer; planning new school sites.

HOKE, TRAVIS.

SHALL SPEED LAWS BE ABOLISHED. BY THE EDITOR. Pop. Sci. Monthly 116 (2): 19-21, 144-145, illus. 1930.

"In the face of increasing highway congestion and a mounting toll of accident and death, the public is demanding swifter travel with greater safety. How can it be done? Popular Science Monthly presents here a definite working plan to solve the problem."

JAMES. STEPHEN.

ACCIDENT PREVENTION IN RURAL COMMUNITIES: AN ADDRESS DURING THE NA-TIONAL GRANGE HOUR, NATIONAL BROADCASTING COMPANY, SATURDAY, AUGUST 15, 1936. 4 pp. [Washington, D. C., Highway Ed. Bd.] 1936. [Mimeographed.]

Individual driver can be reached only by education, and the essence of that theme is neighborliness.

KELSEY, H. N.

COOPERATIVE ORGANIZATION NEEDED TO CUT AUTO ACCIDENTS AND THEFTS. East. Underwriter 36 (37): 18. 1935.

KEMPER, J. S.

SOME THOUGHTS ON SAFE DRIVING. Safety Engin. 72 (5): 25-28, illus. 1936. Speed; highways; fool-proof cars; policing; liquor; licensing; public opinion.

KLEIN, JULIUS.

"MASTERING THE TRAFFIC MENACE." 9 pp. Washington, U. S. Dept. Commerce. 1930. [Mimeographed.]

A radio talk delivered through the courtesy of the Columbia Broadcasting System, 6:45 to 7 p. m., eastern standard time, Sunday, June 15, 1930, from Station WMAL, Washington, D. C.

TRAFFIC SAFETY AS A BUSINESS ASSET. 7 pp. Washington, U. S. Dept. Com-merce. 1930. [Mimeographed.]

A radio talk delivered through the courtesy of the Columbia Broadcasting System, 6:45 to 7 p. m., eastern standard time, Sunday, June 8, 1930, from Station WMAL, Washington, D. C.

KREML, F. M.

HIGHWAY ACCIDENT PREVENTION. Mich. Univ. Conf. Highway Engin. Proc. 19: 210-218, illus. 1933.

Work of the Bureau of Accident Prevention, Police Department, Evanston, Ill.

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LAPPOEHN. (311) VERKEHRSREGELUNG UND VERKEHRSSICHERUNG AUF STRASSEN. Die Beton- strasse 5: 80-84. illus. 1930.
The author discusses traffic regulation and highway safety, including curves, grade crossings, and street intersections.
LAUER, A. R. (312) A PLEA FOR THE NEGATIVE, AND A FEW "DON'TS" FOR THE TRAFFIC SUPERINTEND- ENT AND SAFETY DIRECTOR. Natl. Safety News 33 (4): 12-13, 58, illus. 1936.
LEFFERTS, E. B. (313) SAN DIEGO POLICE PLAN IS REDUCING ACCIDENTS: IF RESPONSIBLE PERSON CAN NOT BE DETERMINED, ALL FIGURING IN AUTOMOBILE COLLISIONS ARE SUM- MONED TO COURT. Nation'S Traffic 2 (3): 18, 57. 1928.
LENANDER, AILAN. (314) TRAFIKSÄKERHETSFRÅGAN UR VÄGMANNASYNPUNKT. Svenska Vagforeningens Tidskr. 21: 547–553. 1934. Traffic safety questions from a road man's point of view.
LÜBKE, HANS. (315) DIE SICHERHEIT IM GROSSSTADTVERKEHR. Der Strassenbau 22: 65–70, 81–87, illus. 1931. Traffic safety in large cities.
LUMBERMENS MUTUAL CASUALTY COMPANY. (316) PREVENTABLE ACCIDENTS. Unpaged, illus. Chicago. c1931. (Lumbermens Mutual Casualty Co. Ser. 2).
Strip pictures (road rules "A" to "O") show the right and wrong way to drive in hazardous situations.
LYON, L. A. (317) RURAL TRAFFIC CONTROL. Mich. Univ. Conf. Highway Engin. 14: 256-265. 1928. Discussion, pp. 261-265.
Three angles of attack are mentioned-legislation, law enforcement through education, and safe highways.
McCASKE, HERBERT. (318) THE TRAFFIC SURVEY AND ITS VALUE TO A POLICE DEPARTMENT IN ACCIDENT PRE- VENTION. Mich. Univ. Conf. Highway Engin. Proc. 19: 247-254. 1933. Discussion, pp. 253-254. Based on work of Detroit Traffic Survey Bureau.
MACDONALD TH (210)
RIGHT TO PASS—IN SAFETY. Fla. Pub. Works 12: 183–184, 187, 191. 1935. Also in Amer. Highways 15 (1): 11–13. 1936.
Early concept of public highway as "right to pass" is background of today's highway usage and customs. If civilization is to advance, we must add "with safety." Safety problem one of organization and administra- tion plus public education. Presents plan of organization necessary for effective administration.
MCENNIS, L. J., JR., (320)
WHEN WINTER COMES. Pub. Safety 11 (5): 20–21, 48, illus. 1936. Gives the winter situation in particular localities and a few cold-weather- driving suggestions for the individual motorists.
McGAFFEY, ERNEST. (321) IS THE LAW A FAILURE? Nation's Traffic 2 (12): 35–36. 1929. Touches on different phases of present-day efforts to enforce life-saving campaigns.
MARSH, B. W., and Lyons, C. J. (322) TRAFFIC ACCIDENT PROBLEM RECEIVES CONTINUOUS, SCIENTIFIC STUDY IN PITTS- BURGH: A SUMMARY OF RECENT ACTIVITIES AND FUTURE PLANS FOR SAFETY WORK. Amer. City 42 (2): 93-95, illus. 1930.

MATHIEU, AUGUSTE.

(323)THEY LOOK FOR THE UNEXPECTED; BUS AND TRAINMEN OF THE NORTHERN OHIO POWER AND LIGHT CO. REDUCE ACCIDENTS IN SPITE OF INCREASING TRAFFIC. Natl. Safety News 19 (5): 23-24, 75, illus. 1929.

Each employee must be approved by the safety division after being trained and accepted by the mechanical and transportation departments of the Northern Ohio Power and Light Co.

MAYBURY, HENRY.

ROADS AND ROAD TRANSPORT. Surveyor and Munic, and County Engin. 80: 571-572. 1931.

Extract of paper presented before the Royal Society of Arts, December 9. 1931.

Road administration: superelevation: automatic light signals: white lines: traffic control: roundabouts: overbridges.

MICKLE, D. G.

TREATING HIGH ACCIDENT LOCATIONS. Pub. Safety 11 (2): 50, 58, 1936.

Each location must be analyzed, and from the factual data presented corrective measures must be devised by an engineer experienced in traffic engineering.

MILLER, E. A.

PREVENTING ACCIDENTS ON ICY PAVEMENTS. Amer. City 41 (4): 94, illus. 1929.

Ice was removed from pavements in Rochester, N. Y., by the use of calcium chloride.

MITTEN MANAGEMENT, INC., PHILADELPHIA,

ACCIDENTS AND THE STREET TRAFFIC SITUATION. 20 pp., illus.

Philadelphia, 1929. (Philadelphia Traffic Survey Rept. 4).

Gives accident situation in Philadelphia, with suggestions for relief.

MOST. VAN DER.

DE GELEIDEHOND EN HET VERKEER. De Auto [Netherlands] 33: 95-96, illus. 1936

Dogs as escorts in traffic.

MULLEN, C. S.

PROTECTION AT SPECIAL DANGER POINTS. Engin. News-Rec. 106: 30-33, illus. 1931.

Wherever unexpected changes in road or driving conditions exist, where curve frequency is small, at grades, summits, and dips, on soft shoulders, icy surfaces, and at bottlenecks, and intersections, protection should be afforded.

NATIONAL CONFERENCE OF STREET AND HIGHWAY SAFETY. (330)

WAYS AND MEANS TO TRAFFIC SAFETY; RECOMMENDATIONS OF NATIONAL CON-FERENCE ON STREET AND HIGHWAY SAFETY, INCLUDING FINDINGS OF ALL CONFERENCE COMMITTEES AND OF GENERAL MEETINGS OF CONFERENCE HELD IN 1924, 1926 AND 1930, AS SUMMARIZED AND APPROVED BY THIRD NATIONAL CONFERENCE, MAY 27-28-29, 1930. 62 pp. Washington, D. C. F**1**930.1

NATIONAL SAFETY COUNCIL, INC.

24 pp., illus. Chicago, Natl. Safety AUTO ACCIDENTS CAN BE REDUCED. Council. 1933.

Brief Bibliography on the Prevention of Automobile Accidents, p. 24.

"Since cities can reduce their automobile accidents at will, a fact attested to by the records of dozens of municipalities, the National Safety Council sets forth in this little pamphlet an outline of the preventive methods that have proved successful time after time in city after city."

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BALANCED PROGRAM FOR REDUCING TRAFFIC ACCIDENTS. 15 pp., illus. Chicago, Natl. Safety Council. c1932. Also in Pub. Safety 6 (6): 4-7, illus. 1932.

Presents a broad working plan for the reduction of traffic accidents and gives a chart showing the causes, results, and remedies.

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34 (333)NATIONAL SAFETY COUNCIL, INC. NEW WAR ON ACCIDENTS. 16 pp., illus. Chicago, Natl. Safety Council. [1936.] Outlines briefly those community measures which through years of trial have been found effective in making our highways safer. (334)SEVEN DAYS FOR SAFETY. 4 pp. Chicago. 1933. [Mimeographed.] (Natl. Safety Council Pub. Safety Memo. 20.) (335)TRAFFIC HAZARDS ON RURAL HIGHWAYS. Inst. Traffic Engin. Proc. 6: 113-116. 1935 [Processed.] A report by the committee giving conclusions and recommendations on reflectorization of highway signs, construction of sidewalks in suburban areas, regulation of speeds in suburban areas, illumination of highways. widening of highways, elimination of unwarranted traffic signals and signs. and billboards and encroaching mercantile advertisements. NAYLOR, J. W. (336)HINTS ON ROAD SAFETY. Jour. Inst. Highway Engin. (n. s.) 2 (1): 7-15. 1935. Classification: built-up areas: road users: general summing up and suggestions. (337)PARKS, B. M. REDUCING AUTOMOBILE ACCIDENTS BY MUNICIPAL CONTROL OF OPERATORS: PRAC-TICAL PREVENTIVE METHODS FOR DISCOVERING AND HANDLING ACCIDENT-RE-PEATERS. Amer. City 46 (4): 92-94. 1932. The material is based on a survey made by Charles S. Slocombe, safety adviser to the Registry of Motor Vehicles in Massachusetts. (338)PHILIP, W. J. OBSERVING 10 RULES WOULD SOLVE TRAFFIC PROBLEMS. Wis. Highway Builder 5(3): 20-21, 1933.The disregard of less than a dozen simple traffic rules causes practically all highway deaths and property destruction. REEDER. E. J. (339)ACCIDENT FACTS AS CLUES TO TRAFFIC TROUBLES. Case School of Applied Science, Cleveland, Ohio. [Addresses delivered at the road congress held at this school, 1931] Unpaged. [Typewritten.] Spot maps, collision-diagram studies, and maximum safe speed computations. (340)THE DAWN OF A NEW DAY IN HIGHWAY SAFETY. Iowa State Col. Highway Safety Conf. Proc. 1: 5-9. 1936. [Mimeographed.] Lists the problems which this "new day" in highway safety faces, how these problems are revealed by the accident experience of the past, and what is being done to solve them.

MOTOR-VEHICLE EDUCATION AT EVANSTON, ILL., BUREAU. Amer. City 50 (9): 87. 1935.

Vehicle-inspection station not only checks vehicle but gives timely pointers to operator on safe driving practices.

PREVENTIVE PLANNING FOR TRAFFIC SAFETY. City Planning 9: 121-125. 1933. Principal types of traffic accidents; prevention of accidents on major streets; planning minor streets for safety.

(343)THE THREE E'S-1. ENGINEERING; 2. EDUCATION; 3. ENFORCEMENT. Pub. Safety 9 (5): 5-6. 1935.

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WHAT ARE SAFE HIGHWAYS? Ariz. Highways 9 (1): 21-22. 1933. Classification of highway, car, and driver.

REINDOLLAR, R. M.

SAFETY RELATIONSHIP RETWEEN WARNINGS, VEHICLE SPEEDS, HIGHWAY DESIGN, VEHICLE DESIGN, AND DRIVERS RESPONSIBILITY. Amer. Highways 15 (3): 18 1936

REYNOLDS. M. O.

MAKE STREETS AND HIGHWAYS SAFE FOR MOTORISTS AND PEDESTRIANS, By an offender. Fla. Pub. Works 13; 127, 137. 1936.

Winner in an essay competition participated in by students of public schools of Florida and various colleges and universities of the State.

ROBERTSON W G

IMPORTANCE OF HIGHWAY SAFETY IN CANADA. Canad. Engin. 71 (16): 8-11: (20): 12-13. 1936.

Motor-vehicle-accident totals; chief factors in highway safety; faults of drivers as accident causes; uniformity in laws; law enforcement; building safety into roads; grade crossings; three- and four-lane highways.

SCHMIDT. ALFONS.

STRASSENVERKEHRSUNFÄLLE UND IHRE BEKÄMPFUNG. Verkehrstechnik 17: 400-403 1936

The author discusses road traffic accidents and their prevention and measures for combating accidents, as instructive and educational measures, surveillance and control measures, police and punishment measures, administrative and legal measures, and technical and other measures.

SCOBIE, VERNON.

YOU CAN'T STOP ACCIDENTS WITH WALL MOTTCES. Bus Transportation 12: 313-314, illus. 1933.

Psychological aspects of safety engineering.

SEVISON, Z. E.

ACCIDENT PREVENTION AND STATISTICS. West. Assoc. State Highway Off. Rept. Annual Meeting 1930: 29-31. 1930.

"The prevention of motor vehicle accidents may be considered under the three elemental factors involved, the car, the driver, and the road."

SIMPSON, R. E., and CAIN, F. C.

SAFETY ON THE STREETS : A DISCUSSION OF THE COST AND PREVENTION OF TRAFFIC ACCIDENTS. Amer. City 49 (6): 121, 123, 125, illus. 1934.

SMITH. Ė. N.

PERSONAL ELEMENT BIG HIGHWAY SAFETY FACTOR. Weekly Underwriter 125: 188 1931

Radio address over Station WTIC, Hartford, Conn. Lists accident remedies.

SPENCER, W. D.

(353)PERFECT COORDINATION OF BRAIN AND MECHANISM NECESSARY TO BEAT AUTO ACCIDENT GAMBLE. Maine Highways 1 (9): 14-15, 21. 1932.

STEARNS, M. M.

(354)YOUR RIGHT TO CROSS THE STREET. Outlook 155: 50-53, 80, illus. 1930.

Reviews accidents in a number of cities and the efforts made to prevent them by suitable regulation.

STOECKEL, R. B.

"MASS DRIVING." Good Roads 71: 305-307, illus. 1928.

Ganging in traffic; drive-to-the-right rule; left turn.

SAFETY FOR ALL USERS OF THE PUBLIC HIGHWAYS. Canad. Good Roads Assoc. Proc. 19: 98-107. 1932. Also in Canad. Engin. 63 (12): 103-106. 1932.

"For better safety, then, there must be more education, which is to be aided by a sort of 'made-over' law which is to be liberal and reasonable, by enlightened highway building and by limited car use, and, finally, by the use of all means at hand to correctly direct mentality."

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TAYLOR, C. P. METHODS FOR STUDYING THE DANGER ZONES ON BURAL HIGHWAYS. Inst. Traffic Engin. Proc. 6: 1-9, illus. 1935. [Processed.]

(358)THAU, WILLIAM. VISION TESTS TO REDUCE AUTOMOBILE ACCIDENTS. Safety Engin. 72: 32. 1936. Greatest need for a driver to operate a motor vehicle safely is health, and above all good eyesight, and a normal field of vision.

THOMAS. C. R.

DEATH A LA MODE. Highway Engin. and Contractor 37 (5): 30-32, illus. 1930

Two ways of alleviating road and street congestion are (1) by building more highways and streets, and (2) by traffic control that speeds travel. Discusses statistical data, and methods of prevention of highway traffic accidents.

TUCKER, HARBY.

TRAFFIC ACCIDENT PREVENTION IN CITIES. Tex. Municipalities 19: 227-229. 1932. Also in Va. Munic. Rev. 9: 199-201. 1932.

Paper prepared for the American Municipal Association and the National Association of State Leagues of Municipalities.

UNITED STATES DEPARTMENT OF AGRICULTURE, BUREAU OF PUBLIC ROADS. (361)PRELIMINARY REPORT TO CONGRESS ON STUDY AND RESEARCH OF TRAFFIC CONDI-TIONS AND MEASURES FOR THEIR IMPROVEMENT, MARCH 23, 1937. 18 pp. Washington, D. C., 1937. [Mimeographed.]

In the research program, particular attention is being given to three phases of the highway safety problem: (1) Detailed study of the lack of uniformity of State motor vehicle laws: (2) study of the characteristics and habits of drivers, including the identification of dangerous drivers: and (3) improvement of the basic data, particularly accident reporting needed for the study of accident causes and prevention.

UNITED STATES DEPARTMENT OF COMMERCE, ACCIDENT PREVENTION CONFERENCE. (362)

HOW MILWAUKEE STOPS ACCIDENTS: SANE AND COURAGEOUS SAFETY EFFORTS CUT DEATH TOLL IN HALF AND GREATLY LOWER NONFATAL INJURIES; PLAN CAN BE APPLIED ANYWHERE; GETTING COOPERATION OF ALL CITIZENS MOST IMPORTANT STEP TO BE TAKEN. 25 pp. Washington, U. S. Govt. Print, Off. 1936.

UPHAM, C. M.

ATTAINMENT OF GREATER SAFETY ON ROADS: CONDITIONS ON THE HIGHWAYS HAVE IMPROVED BUT DEATH RATE IS INCREASING AND MOTORISTS ARE STILL CARELESS. Canad. Engin. 61 (17): 21, 53, 54. 1931.

Radio talk over Station WTIC, Hartford, Conn.

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WHAT OTHER STATES ARE DOING IN ACCIDENT PREVENTION. Pa. Safety Cong. Proc. 1928: 215-219. 1928. (Pa. Dept. Labor and Indus. Spec. Bull. 19). This summary of replies to questionnaire takes up engineering, legislation, operation of vehicles, education, and enforcement.

WILLIAMS, H. B.

(365)THE IMPROVEMENT OF ROADS AND BRIDGES INCLUDING THE RESTRICTION OF RIB-BON DEVELOPMENT ACT, 1935, WITH NOTES. 272 pp. London, Butterworth & Co. (Publishers), Ltd. 1935.

Amenities and provisions for public safety and convenience, pp. 115-131. WILLIAMS, S. J. (366)

LAWYERS LISTEN AS SAFETY EXPERT BLASTS COURTS. Pub. Safety 11 (3): 17, 51. 1936.

Abstract of an address before the American Bar Association in Boston, August 26.

Urgent plea to members to start a decisive and effective campaign against evils that have made "legislation and court procedure the weakest links in the whole chain of accident prevention measures."

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WILLIAMS, S. J.

WE CAN REDUCE ACCIDENTS IF WE WANT TO. Amer. City 43 (3): 117-118, illus. 1930.

In every place or group where real control has been exercised, traffic accidents have been arrested, if not reduced. Big increase has been among private passenger vehicles in places having neither a community safety council nor a driver's-license law.

ZENNER, PHILIP.

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A PLAN TO LESSEN AUTOMOBILE ACCIDENTS. 4 pp. Cincinnati. 1935.

Reprint from the Cincinnati Times-Star, December 4, 1935.

Survey of Ohio cities reveals that automobile accidents are in proportion to size of district covered by one policeman. Author would have policemen's substitutes everywhere and have everybody know of their presence.

ANONYMOUS.

SAFETY EDUCATION

BUILD MODEL DRIVEWAY TO TEACH SAFE DRIVING: CHICAGO STUDENTS GET PRAC-TICAL INSTRUCTION. Pub. Safety 11 (1): 14, 44, illus. 1936.

Instruction at the Lane Technical High School.

NATIONAL SAFE DRIVER MOTORCADE AND "ACCIDENT CLINIC." Safety Engin. 72 (1): 23-24. 1936.

The "clinic" was held in New York City, August 31, under the auspices of the C. I. T. Safety Foundation and the American Automobile Association. A 2-day "accident clinic" for diagnosis of driver habits and driver evils was conducted.

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- PUT TRAFFIC EDUCATION IN THE SCHOOLS: TREND TOWARD COMPULSORY DRIVING INSTRUCTION IN HIGH SCHOOLS GAINING HEADWAY THROUGHOUT COUNTRY. Toledo City Jour. 21: 217-218. 1936.
- (372) SAFETY COURSE FOR 175 DRIVERS. Power Wagon 56 (376): 14-15, 61, illus. 1936.

Describes methods used by the Leonard J. Schrader & Co., Inc., South Bend, Ind.

(373) TALKS ON SAFETY ARE HEARD BY FLORIDA CCC CAMP MEN: ROAD DEPARTMENT JOINS WITH ARMY OFFICERS AND FORESTRY SERVICE IN NEW HIGHWAY SAFETY PROGRAM. Fla. Pub. Works 13: 162. 1936.

TOMORROW'S DRIVERS. Pub. Safety 11 (6): 16-17, illus. 1936. First of its kind in the world, a safe-driving course was given for students at Lane Technical High School, Chicago.

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TEACHING THE TEACHERS. Pub Safety 11 (6): 14-15, 60, illus. 1936.

A series of traffic safety institutes are being held at 12 strategically located points throughout the State of Indiana for the purpose of orienting the teachers in traffic-safety instruction—a course that is now required in all Indiana high schools.

TRAFFIC GAME TRAINS YOUTHFUL DRIVERS. Safety Engin. 72 (5): 24, illus. 1936.

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New traffic safety game "Highway Patrol" is played by means of tiny automobiles on a board which represents the public highway. The Massachusetts Safety Council with the approval of the Department of Education and State Registry of Motor Vehicles have arranged for special classes in the 250 odd high schools of the State, for pupils who intend to be examined in the near future for automobile operator's licenses.

ADAMS. J. D.

EDUCATING THE PUBLIC TO THE NECESSITY FOR CONTINUING THE HIGHWAY PROGRAM. Amer. Road Builders' Assoc. Proc. 33: 950-954. 1936.

Power of publicity; changing sentiment; people aroused at death toll; safer highways necessary—divided lanes; highway construction in Germany and England; idea must be sold to the people.

ALLEN, T. H.

SAFE AND SANE USE OF HIGHWAYS. 108 pp., illus. Milwaukee, Wis., E. M. Hale & Co. 1935.

A Learning Cycle Practice Book: Safety on the Highways, Problems and Exercises for the Classroom, has also been prepared by the author to be used with this book. 96 pp., illus. 1935.

Comprehensive explanation of traffic regulations, to aid teachers in giving their pupils an understanding of traffic codes and highway hazards.

AMERICAN AUTOMOBILE ASSOCIATION.

THE DRIVER. 85 pp., illus. Washington. c1936. (Sportsmanlike Driving Ser. 1.)

Introducing the automobile and its driver; part of driving that becomes habit; reaction time and the driver; eyesight and safety; physical fitness and safety; part of driving that requires judgment and quick decision; driver as master of the situation.

DRIVER AND PEDESTRIAN RESPONSIBILITIES. 77 pp., illus. Washington. c1936. (Sportsmanlike Driving Ser. 2.)

Surveying the driver; psychology of the driver; obligations of the driver; good sportsmanship at the wheel; the man on foot; sound pedestrian practices; safeguarding the pedestrian.

SOUND DRIVING PRACTICES. 108 pp., illus. Washington. c1937. (Sportsmanlike Driving Ser. 3.)

Meaning of sound-driving practices; sound-driving practices and laws; city driving; some laws of nature; driving on the open highway; driving in accordance with conditions; when driving practices aren't sound.

- SAFETY AND TRAFFIC ENGINEERING DEPARTMENT.

SPORTSMANLIKE DRIVING: A PROGRAM FOR HIGH SCHOOLS IN OUTLINE FORM. Rev. ed., 51 pp., illus. Washington, D. C., c1935. (High School Ser. 1.) A teachers' outline for a course in traffic safety and driving.

AMERICAN COUNCIL ON EDUCATION—COMMITTEE ON MATERIALS OF INSTRUCTION. (383)

BULES OF THE ROAD... With the co-operation of the Subcommittee on Political Education of the American Political Science Association. 32 pp., illus. Washington, American Council on Education. c1933. (Achievements of Civilization no. 6).

References, p. 32.

Early streets and roads; early traffic rules; twentieth-century traffic problems; traffic surveys; changes which have been made in our highways; new rules of the road; traffic control in the United States today.

AMERICAN PETROLEUM INSTITUTE, COMMITTEE ON ACCIDENT PREVENTION IN MAR-KETING. (384)

A. P. I. MANUAL ON SAFE DRIVING OF AUTOMOBILES. Amer. Petroleum Inst. Accident Prevention Manual 2, 8 pp., illus. Dallas, Tex., Issued by the Department of Accident Prevention. 1931.

Discusses right-of-way and parking and gives some general information.

AUTOMOBILE MANUFACTURERS ASSOCIATION, INC. (385)
YOU IN YOUR CAR ON CITY STREETS. [Prepared by the Automobile Manufacturers Association, in cooperation with the Detroit Traffic Courts and Police Authorities. 63 pp., illus. New York, Auto. Manfrs. Assoc. c1936. A suggested course of instruction in traffic safety.

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BAISE, W. V.

STATE-WIDE HIGHWAY SAFETY EDUCATION. Amer. Highways 15 (2): 16-18. 1936. Also in S. Dak, Hiway Mag. 11 (6): 3, 7, 1936.

Safety education program divided into education of (1) pedestrians (children and adults), (2) motorists, (3) highway departments, and (4) enforcement forces.

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MILLSBORD SCHOOL OFFERS DRIVER TRAINING. Safety Ed. 16 (sec. I): 62-63. 81, illus, 1936.

Millsboro Public School is in Millsboro, Del.

BERRY, F. C.

MAKE RECKLESS YOUTHS ATTEND SCHOOL FOR DRIVERS. Pub. Safety 4 (12): 12-13, illus, 1930.

In Minneapolis any young men or young women found guilty of flagrant driving violations are sent to a traffic school for five sessions of 2 hours each in lieu of paving a fine.

BEST, J. A.

(389)TEACHING SAFETY TO TRAFFIC VIOLATORS. Amer. City 51 (7): 91, illus. 1936. Describes the Police Traffic Safety School at Asheville, N. C.

CALIFORNIA STATE DEPARTMENT OF EDUCATION. (390)MANUAL ON TRAFFIC SAFETY FOR CALIFORNIA SECONDARY SCHOOLS. 83 pp., illus. [Sacramento, Calif. 1936.] (Calif. Dept. Ed. Bull. 8, Nov. 1, 1936).

CONNECTICUT STATE DEPARTMENT OF MOTOR VEHICLES. (391)FACTS ABOUT THE OPERATION OF MOTOR VEHICLES ON THE STREETS AND HIGH-WAYS OF CONNECTICUT FOR PRESENT DAY OPERATORS AS WELL AS THE YOUTH SEEKING A LICENSE IN THE NEAR FUTURE. 47 pp., illus. Hartford, Conn., State Dept. of Motor Vehicles. 1936.

- SAFETY PROMOTION SECTION.

CONNECTICUT EXPERIMENTS WITH ROAD INSTRUCTION AS A PRACTICAL FEATURE OF A COURSE IN SAFE DRIVING AT DARIEN HIGH SCHOOL. 11 pp., illus. Hartford, Conn. 1937, [Processed.]

EVERET, ELEANOR.

TOMORROW'S DRIVERS. Hygeia 14: 594-598, 663, illus. 1936.

Safety education in the schools, school-boy-patrol idea, driver classes, radio broadcasts, and classification of drivers are discussed.

FLOHERTY, J. J.

YOUTH AT THE WHEEL: A REFERENCE BOOK ON SAFE DRIVING. 168 pp., illus. Philadelphia, J. B. Lippincott Co. c1937.

"This book is not intended to make young drivers danger-conscious but rather to instil into them a deep safety-consciousness that shall influence their judgment and their acts while they are at the wheel so that they shall drive valiently and well.'

FLORIDA GOVERNOR'S COMMITTEE ON PUBLIC SAFETY. (395)MANUAL OF SAFETY INSTRUCTION FOR THE ELEMENTARY GRADES. 46 pp. Tallahassee, Fla., Governor's Com. of Pub. Safety. [1936?]

"A series of proven lesson plans for instructing elementary grade children in this study of safety so that they may be better equipped to protect themselves against the increasing dangers of life, limb, and property of this bighly civilized machine age?" highly civilized machine age.

GENERAL FEDERATION OF WOMEN'S CLUBS, COMMITTEE ON PUBLIC SAFETY. (396) WOMEN AND THE WAR ON ACCIDENTS. 16 pp. Sheboygan, Wis., Gen. Fed. of Women's Clubs. [1935?]

"The purpose of this pamphlet is to outline the salient points of a traffic accident prevention program for communities, and to show how women and Women's Clubs can cooperate effectively in bringing such a program to a successful conclusion" (p. 1).

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GREENAN, J. T.

(397)

PROMOTION OF SAFETY IN AUTOMOBILE TRAVEL, A TYPICAL GREENAN-MEREDITH PROBLEM FOR SECONDARY SCHOOL STUDENTS. 21 pp. Boston, Houghton Mifflin Co. 1936. (Ed. Prog. Bull. 12, no. 1. 1936.)

Reference readings, pp. 20-21.

Discusses the following: Waste of human resources through automobile accidents; Should motorists be prevented from traveling more than 40 miles an hour by means of mechanical governor attached to the automobile engine?; Education in safe driving is the best solution of the problem.

HALSEY, M. N.

(398)

THE PROBLEM OF EDUCATION IN THE PROMOTION OF HIGHWAY SAFETY. Iowa State Col., Highway Safety Conf. Proc. 1: 10-13. 1936. [Mimeographed.]

It is the problem of an educational program to develop interest, to provide information, to get the individual sufficiently interested to do something about it, and to develop experts in the field.

HARVARD UNIVERSITY, ALBERT RUSSEL ERSKINE BUREAU FOR STREET TRAFFIC RESEARCH. (399)

OUTLINE OF INSTRUCTION, NEW ENGLAND TRAFFIC OFFICERS' TRAINING SCHOOL. [Conducted by Bureau of Street Traffic Research, Harvard University, and International Association of Chiefs of Police, Traffic Safety Division, August 17 to 29, 1936, Cambridge, Mass.] Variously paged. [Cambridge, Mass.] [1936.]

LYONS, L. M.

(400)

ARMCHAIR DRIVING TEST, A SELF-ANALYSIS FOR AUTOMOBILE OPERATORS. [5] pp. Boston, Mass., Published by the Governor's Committee on Street and Highway Safety. [1930?]

"This test was devised as a means of stimulating Motorists to carefully analyze their driving habits and to point out the outstanding careless practices that are causing accidents upon our streets and highways.

Through the courtesy of the Boston Sunday Globe it has been made possible to reprint this material."—Inside cover title p.

MARSH, B. W.

(401)

SAFETY EDUCATION IN OUR PUBLIC SCHOOLS. Iowa State Col., Highway Safety Conf. Proc. 1: 16-19. 1936. [Mimeographed.]

Public safety must be stressed through schools generally, the grade schools, the high school, and the teachers' colleges and normal schools.

(402)

MOTOR VEHICLE DRIVING. 46 pp., illus. [Austin, Tex.], Issued by the Bureau of Industrial Teacher Training, Division of Extension, University of Texas, and the State Department of Vocational Education, Trade and Industrial Division, Austin, Tex., in conjunction with the Topical Committee on Vocational Training of the American Petroleum Institute. c1936. (Vocat. Training Courses, Petroleum Indus. Ser.) [Processed.]

MASSACHUSETTS. DEPARTMENT OF EDUCATION, COMMITTEE ON SAFETY EDUCATION. (403)

A COURSE OF STUDY IN HIGHWAY SAFETY EDUCATION FOR JUNIOR AND SENIOR HIGH SCHOOLS. 37 pp. [Boston, Mass.] 1935. (Mass. Dept. of Ed. 1935, Bull. 10, Whole No. 288).

The pedestrian; the driver; physical, mental, and emotional handicaps; safe driving hints; examples of safety activities; recommendations for use of the course.

METROPOLITAN LIFE INSURANCE CO.		(404)
CALLING ALL DRIVERS. 17 pp., illus. New York.	[1936?]	(
Some basic principles of better driving.		

NATIONAL BUREAU OF CASUALTY AND SURETY UNDERWRITERS. (405) A COURSE IN AUTOMOBILE DRIVING FOR SECONDARY SCHOOLS. 16 pp., illus. New York. [1934] [Multigraphed.]

MARTIN, R. L.

NATIONAL SAFETY COUNCIL, INC.

SEVEN DAYS FOR SAFETY. 24 pp., illus. c1929. (Natl. Safety Council Pub. Safety Ser. 20).

"Intensive campaigns of short duration have their place in the promotion of community accident prevention. The purpose of this pamphlet is to set forth the conditions and activities essential to the success of such campaigns, and to outline a program of special features and activities."

- Education Division.

(407)

GOOD DRIVING: A MANUAL OUTLINING METHODS OF ORGANIZING PROGRAMS OF INSTRUCTION IN SECONDARY SCHOOLS AND PRESENTING SUBJECT MATTER CON-TENT ON VARIOUS ASPECTS OF AUTOMOBILE DRIVING. 43 pp., illus. New York. c1934

- PUBLIC SAFETY DIVISION.

(408)TRAFFIC LESSONS. Natl. Safety News 17 (5): 40, (6): 44, illus.; 18 (1): 44, illus.; (2): 46, illus.; (3): 52, illus.; (4): 102, illus.; (5): 58, illus.; (6): 48, illus. 1928.

Series of eight 5-minute traffic lessons for the use of speakers before clubs and organizations at a series of successive meetings, as follows: 1. The Pedestrian's Responsibility; 2, Motorists and the Pedestrian; 3, Making the Least of the Turning Evil; 4, Every Driver Should Obey Stop and Go Signals; 5, Parking and Stopping Restrictions; 6, Speed and Reckless Driving; 7, Courtesy in Traffic; 8, Vehicle Equipment and Occupancy.

NEW HAMPSHIRE, MOTOR VEHICLES DEPARTMENT, AND STATE BOARD OF EDUCATION. (409)

AN ELECTIVE NON-UNIT COURSE IN AUTOMOBILE DRIVING IN SECONDARY SCHOOLS. DESIGNED TO PREPARE FOR A DRIVER'S LICENSE. 18 pp., illus. Concord, N. H. [1935.] [Processed.]

NEW YORK (STATE) JOINT LEGISLATIVE COMMITTEE ON INTERSTATE COOPERATION.

- (410)
- REPORT. 149 pp. Albany, N. Y., J. B. Lyon Co., Printers. 1936. (Leg. Doc. (1936) no. 111.)

Regional conference of highway safety, pp. 64-101. An act to provide for highway safety instruction in public schools; an act to provide for reciprocal exchange of motor-vehicle records; an act requiring fingerprinting of motor-vehicle operators; comparative survey of motor-vehicle laws.

NEYHART, A. E.

- A HIGH SCHOOL GROUP LEARNS TO DRIVE. Safety Ed. 15 (Sec. 1): 32-34, illus. 1935.
- Author demonstrates that group method is practical, economical, and also a timesaver.

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PRACTICAL METHODS AND INTERESTING RESULTS OF HIGHER EDUCATION FOR DRIVERS. Inst. Traffic Engin. 7: 56-60, illus. 1936. [Processed.]

Challenge in driver training; classes in "Sportsmanlike Driving"; good driving habits do not just happen; methods of instruction; practice streets and dual-control cars; program gaining momentum.

PARKER, E. S., and MOONEY, BOOTH.

SAFE DRIVING AND ACCIDENT PREVENTION: A HIGH SCHOOL MANUAL ON SAFETY. 96 pp., illus. 1937.

"The person who studies this book will find that virtually all of the questions and projects strive to overcome those twin menaces to safety everywhere: ignorance and carelessness" (p. 3).

(414)PENNSYLVANIA DEPARTMENT OF PUBLIC INSTRUCTION. SAFETY EDUCATION IN THE PUBLIC SCHOOLS: A MANUAL OF ORGANIZATION AND ADMINISTRATION. 46 p. Harrisburg, Pa. 1935. (Pa. Dept. of Pub. Instruction Bull. 94, 1935).

PITTSBURGH BETTER TRAFFIC COMMITTEE. (415)TRAFFIC SAFETY HANDBOOK FOR SCHOOLS. 20 pp., illus. Pittsburgh. [1934.]

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REEDER. E. J.

(416)

THE PLACE OF THE PUBLIC SCHOOLS IN THE SAFETY PROGRAM. IOWA State Col., Highway Safety Conf. Proc. 1: 26-30. 1936. [Mimeographed.]

"Their place in it is justified by the fact that transportation is a basic factor in our social and economic system and motor vehicle transportation is a phase in which a large percentage of the public take part and to the hazards of which all of the public are at some time subjected."

SEYMOUR. FORREST.

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RESPONSIBILITY OF THE NEWSPAPER IN SAFETY EDUCATION. IOWA State Col., Highway Safety Conf. Proc. 1: 20-23. 1936. [Mimeographed.]

"The newspaper is potentially as much a leader as are the responsible heads of government, and it is potentially as much an educator as is the school system.

"In a news way, the press is trying more vigorously to make the facts about highway travel real to its readers."

STACK, H. J.

(418)COURSE OF INSTRUCTION IN HIGH SCHOOLS ON MOTOR VEHICLE OPERATION. East Conf. Motor Vehicle Adminrs. [Addresses] [New York City] 1935: 9-18. 1935. [Mimeographed.]

Tells what some of the States have been doing.

STOECKEL. R. B.

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POST-GRADUATE DRIVING. 4 pp., illus. Hartford, Conn., Dept. of Motor Vehi-cles. 1931. (Conn. Dept. of Motor Vehicles Bull. 83). Also in Jour. Amer. Ins. 9 (5): 25-26, 30. 1932.

Through the medium of motion pictures the right and wrong ways of performance of many advanced driving acts can be shown.

TELFORD. MARIAN.

TRAFFIC SAFETY EDUCATION PROJECT OF THE NATIONAL CONGRESS OF PARENTS AND TEACHERS. 7 pp. Washington, D. C., Natl. Cong. of Parents and Teachers. 1936.

Address broadcast Wednesday, June 17, 1936, over the blue network of the National Broadcasting Co.

TORKELSON. M. W.

HOW TO PREVENT HIGHWAY ACCIDENTS: SAFETY EDUCATION IS AS IMPORTANT AS TRAFFIC RULES AND SAFETY DEVICES. Wis. Highway Builder 3 (3):11-12. 1931.

UNITED STATES WORKS PROGRESS ADMINISTRATION FOR THE STATE OF WASHINGTON,

GENERAL OUTLINE OF A SAFE DRIVERS' SCHOOL. 78 pp., illus. Seattle, Wash. 1936. [Mimeographed.]

Prepared in cooperation with the Automobile Club of Washington.

"This complete outline is based upon the experiences gained in the Seattle Safe Drivers' School of 1936, which was held from February 20 to March 19, in Rhodes' Auditorium" (p. 5).

VERMONT STATE BOARD OF EDUCATION. (423)HIGH SCHOOLS OF VERMONT COURSE OF STUDY IN HIGHWAY SAFETY. 56 pp. Montpelier. 1937.

VIRGINIA STATE DEPARTMENT OF EDUCATION. (424)SAFETY EDUCATION: SOURCE MATERIAL SUGGESTED FOR CORE CURRICULUM OF

VIRGINIA SECONDARY SCHOOLS. Prepared . . . in cooperation with the Division of Motor Vehicles. 76 pp., illus. [Richmond, Va.] Published by the Va. Dept., American Legion. c1936.

The automobile, pp. 13-23, discusses mechanical aspects and operation. The safe highway, pp. 25-46, deals with road signs, traffic signals, road conditions and skidding, and additional material on the automobile.

WHITNEY, A. W., ed.

MAN AND THE MOTOR CAR. 256 pp., illus. New York, Natl. Bur. of Casualty and Surety Underwriters. 1936. (Natl. Bur. of Casualty and Surety Underwriters, Educ. Ser. v. 10.) References, pp. 244-252.

Prepared especially as a textbook for use in high school good driving courses.

A Teacher's Manual Designed for Use with "Man and the Motor Car." edited by H. J. Stack. 48 pp., illus. 1937.

WITHE, S. F.

(426)DEVELOPMENT IN HIGHWAY SAFETY EDUCATION. East. Conf. Motor Vehicle Adminrs. [Addresses] [New York City] 1935: 25-29. 1935. Also in Safety Engin, 70: 170-172, illus, 1935, [Mimeographed.]

Requirements of effective safety education: haste as prime cause of accidents: difference between haste and speed.

SAFETY CAMPAIGNS

ANONYMOUS.

DENVER'S OFFENSIVE REDUCES MOTOR TOLL. Pub. Safety 11 (4): 26, 28, illus. 1936.

Rigid enforcement of traffic regulations plays important role in reducing motor deaths in Denver more than 23 percent first 7 months of 1936 as compared with 1935.

A DRIVE FOR LIVES THAT WON. Pub. Safety 11 (5): 54, illus. 1936. Minnesota reduced traffic accidents more than 20 percent in the month of September and saved the lives of 13 persons.

- FATALITY RATE: 0.0-AND THE REASONS WHY: NORWOOD, MASS., LITERALLY LEAVES NO STONE UNTURNED TO ELIMINATE TRAFFIC ACCIDENTS. Pub. Safety 6 (12): 4-5, illus, 1932.
- THE FIRST SIX MONTHS-FIVE-YEAR CAMPAIGN REACHES HALF YEAR MARK-LIVES SAVED. Pub. Safety 11 (1): 13. 1936.
- Lists the safety activity carried out in various States in the National Safety Council 5-year campaign.
- FIVE-THOUSAND DOLLARS FOR AUTO SAFETY IDEAS. JOUR. Amer. Ins. 13 (6): 9. 1936.

Commercial Investment Trust, Inc., of New York announces prize of \$5.000 to be awarded to the one who has "contributed the most to helping and arousing the public to cut down traffic accidents." Lists the objectives.

(432)"HEAT ON" IN FIVE-YEAR DRIVE. Pub. Safety 11 (2): 44, 60, illus. 1936. Describes the National Safety Council's 5-year campaign to cut traffic accidents 35 percent by the end of 1940 and lists a few of the State activities.

HOW 15 AMERICAN CITIES REDUCE AUTO DEATHS: WHILE NATION'S TOLL SOARED, THEY DECREASED THEIR MOTOR VEHICLE FATALITIES. Pub. Safety 4 (4): 13-14. 1930.

LAW ENFORCEMENT CUTS DETROIT TRAFFIC ACCIDENTS. Good Roads 71: 514-515, illus. 1928.

Detroit has reduced its motor fatalities 27 percent as a result of law enforcement.

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44 MISC. PUBLICATION 296, U. S. DEPT. OF AGRICULTURE

ANONYMOUS.

LOCAL AGENTS DRIVE ON ALL FRONTS TO REDUCE HIGHWAY ACCIDENTS. Weekly Underwriters 132: 377, 1935.

Haste a factor; how liquor figures; dusk and darkness; safe conditions a snare.

NATIONAL TRAFFIC SAFETY CONTEST: 30 MILES AN HOUR. Pub. Safety 11 (6): 30, 48, illus, 1936.

Thirty-day drive was conducted to slow down St. Louis motorists to a maximum speed of 30 miles an hour as means of determining to what extent accidents were related to speed.

NATIONAL TRAFFIC SAFETY CONTEST: ANNOUNCING A NEW CONTEST BETWEEN STATES. Pub. Safety 11 (5): 30. 1936.

An interstate traffic safety contest in which States will compete on the basis of state-wide traffic-safety activities and motor vehicle fatality records will be held for the first time in 1937 under the direction of the National Safety Council.

Lists the complete grading schedule and shows on what points the States will be judged.

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SAFETY CAMPAIGN OF STATE GOVERNORS TO REDUCE AUTOMOBILE ACCIDENTS. Safety Engin. 64: 50. 1932.

Lists the Governors in 29 States who are initiating concerted program of automobile-accident prevention through the issuance of proclamations, messages, or statements.

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STATE GOVERNORS PROMOTE TRAFFIC SAFETY: CHIEF EXECUTIVES ISSUE PROCLA-MATIONS CALLING UPON STATES TO PARTICIPATE IN A CONCERTED EFFORT IN THE PROMOTION OF STREET AND HIGHWAY SAFETY. Safety Engin. 66: 83-84. 1933.

SOUTH BEND DRAFTS INDUSTRY IN DRIVE AGAINST ACCIDENTS. Pub. Safety 11 (6): 12-13, 58, illus. 1936.

Twenty thousand employees of 25 industrial concerns in South Bend, Ind., are cooperating with the South Bend Civic Safety Council in a broad program of traffic safety.

YOU WON'T EE KILLED---IF YOU DRIVE CAREFULLY: GOVERNOR, HIGHWAY DEPART-MENT, STAFF POLICE AND OTHER AGENCIES JOIN HANDS TO REDUCE AUTO ACCI-DENTS. N. Mex. 14 (2): 31-33, 1936.

AMERICAN LEGION, NATIONAL AMERICANISM COMMISSION. (442)

THE AMERICAN LEGION AND THE TRAFFIC ACCIDENT PROBLEM: A PROGRAM, 32 pp., illus. New York, N. Y., Published by the Natl. Americanism Comn. and the Natl. Bur. of Casualty and Surety Underwriters. c1935.

Suggested reference and educational material, pp. 29-32.

"There are four main points at which the problem can be attacked: through legislation, through education—both for children in our schools and for adults—through engineering and through law enforcement. The American Legion is well fitted to do effective work along all of these lines" (p. 6).

(443)

COMMUNITY SAFETY ACTIVITIES FOR AMERICAN LEGION POSTS. 38 pp., illus. [Indianapolis.] c1931.

"This booklet is made possible through the cooperation of the National Bureau of Casualty and Surety Underwriters, One Park Avenue, New York, New York, with the National Americanism Commission of the American Legion."—Foreword.

Discusses the following: The national accident problem and the American Legion; traffic safety; child education; and home safety.

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BILLINGS, CURTIS,

GRAND RAPIDS IS SAFETY CONSCIOUS : BY A SIMPLE, UNDERSTANDABLE, INCESSANT SAFETY PROGRAM, THIS FURNITURE CENTER IS REAPING RICH DIVIDENDS EACH YEAR. Natl. Safety News 32 (3, pt. 1): 25-26, 69, illus. 1935.

CRAIG. H. K.

FORESTALLING 27.000 TRAFFIC DEATHS ON PENNSYLVANIA HIGHWAYS: BASED ON THE RATIO OF FATALITIES TO MOTOR VEHICLE REGISTRATION, IT IS ESTIMATED THAT LARGE TOLL WILL BE TAKEN IN TEN YEARS. Nation's Traffic 2 (5): 15-16 illus, 1928.

Reviews Pennsylvania's program for making its highways safer and more passable. Traffic control, safety in construction and maintenance, signs and markings, and education are some of the phases dealt with.

GONTER, C. G.

A 30-MILE-AN-HOUR EXPERIMENT: MAYOR OF ST. LOUIS INAUGURATES SPEED CONTROL PLAN WITH MARKED SUCCESS IN THE REDUCTION OF TRAFFIC ACCI-DENTS ON THE STREETS OF A BUSY CITY. Safety Engin. 72 (6): 37-38, 1936.

GRONSETH, H. E.

INDUSTRY BATTLES DUMB DRIVING ON BROAD FRONT. Automotive Indus. 73: 198-200, illus. 1935.

Leading companies actively promote education of motorists in safer driving habits to cut accident toll.

HAMMOND. H. F.

(448)A MANUAL FOR TRAFFIC SAFETY SURVEY PROCEDURE. Unpaged, illus. New York, National Bureau of Casualty and Surety Underwriters. c1936. [Multigraphed.]

"This manual has been prepared as a guide for communities undertaking the study of local traffic as it affects public safety. The methods, forms, and procedures which are required have been taken from traffic safety surveys made in various communities."-Foreword.

HOFFMAN, P. G.

THE SAFETY PROGRAM OF THE AUTOMOBILE MANUFACTURERS. ASSOC. Highway Off. North Atlantic States Proc. 12: 50-56. 1936.

Lists the national organizations which have done the most effective job in the safety field and outlines the particular segment of the job which each will undertake.

HOFFMAN, REYBURN.

May 1937."

THE "30" CAMPAIGN IN ST. LOUIS. Amer. City 51 (12): 51-52, illus. 1936. Speed slowed down to 30 miles for 30 days. Result : one death in 10 days against one in 21/2 days.

- MAINE COMMITTEE OF FIFTY ON MAINE HIGHWAY SAFETY CAMPAIGN. (451)REPORT, MAINE HIGHWAY SAFETY CAMPAIGN, 1936. 48 pp. Augusta. 1936.
- NATIONAL CONFERENCE ON STREET AND HIGHWAY SAFETY. (452)GUIDES TO TRAFFIC SAFETY. U. S. Department of Agriculture, Bureau of Public Roads. Rev. ed., 31 pp. Washington, U. S. Govt. Print. Off.

1937. "This report, prepared by the Executive Committee of the National Conference on Street and Highway Safety to outline methods suggested by experience for dealing with current pressing problems of street and highway safety, was unanimously approved by the Fourth National Conference, Washington, D. C., May 23-25, 1934. Revised by the Executive Committee,

NATIONAL SAFETY COUNCIL, INC.

(453)A COMMUNITY SAFETY PROGRAM FOR CITIES BELOW 10,000 POPULATION. 3 pp. Chicago. 1935. [Mimeographed.] (Natl. Safety Council Pub. Safety Memo. 15).

(454)

ESSENTIALS OF A COMMUNITY SAFETY PROGRAM. Rev. ed., 5 pp. Chicago. 1935. [Mimeographed.] (Natl. Safety Council Pub. Safety Memo. 16).

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NATIONAL SAFETY COUNCIL, INC.

SAFER CITIES : TRAFFIC SAFETY ACTIVITIES OF THE LEADING AMERICAN COMMUNI-TIES IN THE NATIONAL TRAFFIC SAFETY CONTEST, 1932, 39 pp., illus. Chicago, 1933, [Processed.]

This namphlet illustrates some of the concrete things done and materials used in several of the leading cities, taken from the contest reports and exhibits.

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SAFETY IN THE SMALL COMMUNITY. 64 pp., illus. Chicago, [1936.]

"This pamphlet is a digest of specific recommendations that with present facilities can and should be carried on in communities between 10,000 and 25,000 and even greater population" (p. 1).

SCHEER, C. F.

DETROIT'S DRIVE FOR SAFE DRIVING. Natl. Safety News 34 (5): 25-26, 67-69. illus, 1936

With the cooperation of industry, the Detroit Industrial Safety Council is applying interfleet-contest idea to employees' private cars.

TAYLOR, F. C.

THE TRAFFIC ENGINEER'S RESPONSIBILITY IN HIGHWAY PLANNING. Inst. Traffic Engin, Proc. 7: 25-29, 1936, [Processed.]

Various States, aided by the United States Bureau of Public Roads, are conducting comprehensive surveys, including detailed inventories of physical highway facilities, traffic counts on all roads, and financial analyses of source and expenditure of highway funds. Completed surveys will guide future highway planning.

WILLIAMS, S. J.

CONTEST WINNERS SHOW HOW TO CHECK AUTOCIDES. Pub. Safety 8 (9): 10-1934. 12. illus.

Cities taking part in the National Traffic Safety contests attained a better record than did the country as a whole.

(460)

FIGHTING YOUR CITY TRAFFIC ACCIDENTS WITH RECORDS AND ENGINEERING. Amer. City 46 (1): 106-108, illus.; (2): 102-104, illus. 1932.

Series of articles suggesting a city program to win the National Traffic Safety contest.

SAFETY ORGANIZATION

ANONYMOUS.

MINNEAPOLIS SETS UP ACCIDENT INVESTIGATION BUREAU. Pub. Safety 4 (10): 17. 1930.

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OHIO STATE SAFETY COUNCIL DEDICATES FIRST "SAFETY EDUCATIONAL HIGHWAY" ON ROUTE 8, NORTH OF CANTON: FIRST TANGIBLE STEP TOWARD GOAL OF COUNCIL IN COMPREHENSIVE PROGRAM TO MAKE OHIO HIGHWAYS SAFEST IN AMERICA FOR MOTORISTS AND PEDESTRIANS. Ohio Motorist 28 (11): 18. 1936.

BILLINGS, CURTIS.

ACCIDENT PREVENTION BUREAUS IN MUNICIPAL POLICE DEPARTMENTS: WHAT THEY DO AND HOW THEY ARE SET UP. 48 pp., illus. Evanston, Ill. A publication of International Association of Chiefs of Police (Safety Division) and Northwestern University Traffic Safety Institute. c1937.

EDMUNDS, E. L.

(464)ORGANIZING FOR A TRAFFIC SAFETY SURVEY. Inst. Traffic Engin. Proc. 7: 14-21. 1936. [Processed.]

In organizing traffic surveys, consulting engineers should win the support of a strong citizens' committee. After the scope of the survey is determined, employees must be carefully selected and trained. The field, statistical, and engineering groups must work together.

(455)

HOFFMANN, REYBURN.

HOW LOCAL SAFETY ORGANIZATIONS CAN HELP THE TRAFFIC ENGINEER. Inst. Traffic Engin. Proc. 7: 39-41. 1936. [Processed.]

Cooperation a vital need; results of the St. Louis safety campaign; traffic activities of the St. Louis Safety Council; the traffic engineer's relation to civic groups.

MCCLINTOCK, MILLER, and WILLIAMS, S. J.

MUNICIPAL ORGANIZATION FOR STREET TRAFFIC CONTROL. 28 pp., illus. New York, Munic. Admin. Serv. 1930. (Munic. Admin. Serv. Pub. 16). Selected bibliography, p. 28.

Part I, by Dr. McClintock, discusses the technical, engineering factors in traffic control, and describes briefly municipal traffic-engineering organizations. Parts II and III, by Mr. Williams, present a picture of the organization and work of the traffic divisions of our police departments, and of the new traffic courts and quasi-judicial agencies which have been created to handle traffic prosecutions.

MARSH, BURTON.

TRAFFIC ENGINEERING IN YOUR CITY OR TOWN. Iowa State Col., Highway Safety Conf. Proc. 1: 88-92. 1936. [Mimeographed.]

Traffic engineering consists of getting the facts about traffic conditions and problems and developing remedies and solutions on the basis of an impartial analysis and interpretation of these facts. Discusses the place and services of a trained traffic engineer.

(468) HOW TO ORGANIZE YOUR COMMUNITY FOR TRAFFIC SAFETY. IOWA State Col., Highway Safety Conf. Proc. 1: 31-36. [Mimeographed.]

Who should be represented; who should be the chairman; how shall I get the organization started; who should be selected as committee chairman; how often should meetings be held; with what type of activities should the committee start.

MARTIN, C. H.

CITIZENS ORGANIZE TO COMBAT ACCIDENTS. Safety Engin. 72: 159-160. 1936. Discusses the following: Individual responsibility; Automobile Accident Prevention Association of Oregon; reporting violators; news reels; lectures, and radio programs; education in public schools.

NATIONAL BUREAU OF CASUALTY AND SURETY UNDERWRITERS.

CREATING SAFER COMMUNITIES. 47 pp., illus. New York. 1936.

This manual shows effective ways in which to deal with the community traffic problems; including descriptions of the following activities: (1) Getting the program under way; (2) preparing and using accident facts; (3) the educational program; (4) enforcement; (5) engineering; and (6) the rural problem.

Special editions have been prepared for the following States, with their official organizations: New York, New York State Traffic Commission; Virginia, Statewide Safety Committee; Pennsylvania, Governor's Highway Safety Council; Maine, Highway Safety Division; New Hampshire, State Safety Council; Vermont, Motor Vehicle Department; Massachusetts, State Safety Council and Registry of Motor Vehicles; Rhode Island, Governor's Committee on Street and Highway Safety; Maryland, Commissioner of Motor Vehicles; West Virginia, Department of Public Safety; North Carolina, Department of Revenue; South Carolina, State Highway Patrol; Minnesota, Public Safety Council; Wyoming, Governor's Highway Safety Committee; Kansas, Motor Vehicle Department; North Dakota, Department of State Highways; Michigan, State Safety Council; California, State Traffic Commission.

NATIONAL SAFETY COUNCIL, INC.

STATE AND COMMUNITY ORGANIZATION FOR SAFETY. 24 pp. Chicago, Natl. Safety Council. [1936?]

"This pamphlet is one of a series produced for public officials and civic leaders who are interested in a broad program of street and highway acci-26777°-38-4

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NATIONAL SAFETY COUNCIL, INC.

STATE AND COMMUNITY ORGANIZATION FOR SAFETY-Continued.

dent prevention The series includes: The New War on Accidents (general outline of entire program): Engineering for Safety; Enforcement for Safety (including traffic legislation); Educating the Public for Safety; State and Community Organization for Safety."

· REEDER. E. J.

MANY CITIES USING ACCIDENT INVESTIGATION SQUADS. Pub. Safety 5 (5): 8-10, illus, 1931,

Successful in Dayton; enthusiasm of officers help; no need for extra manpower.

ROBINSON, R. W.

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(472)

AUTOMOBILE FATALITIES REDUCED BY A HIGHLY ORGANIZED COMMUNITY EFFORT. Amer. City 42 (2): 92-93. 1930.

Fatalities reduced in San Francisco; increased appropriations for trafficcontrol improvements: activities of traffic-law-enforcement board.

ROPER, D. C.

(474)

AN ADDRESS . . . Delivered at opening session of accident prevention conference. Department of Commerce Auditorium, Washington, D. C., December 18, 1935. 15 pp. Washington, D. C. 1935. [Mimeographed.]

Broadcast over Nation-wide network of the National Broadcasting Co. Automobile industry is the group with the largest responsibility. Government needs to provide accurate statistics. Opportunities of the various committees are outlined.

UNITED STATES DEPARTMENT OF COMMERCE, ACCIDENT PREVENTION CONFERENCE. (475)

HOW TO STOP ACCIDENTS: SUMMARY OF OPINION DEVELOPED AT A CONFERENCE OF CONTACT MEN, OPERATING IN CONNECTION WITH THE ACCIDENT PREVENTION CONFERENCE, AT A TWO-DAY MEETING IN THE DEPARTMENT OF COMMERCE, WASHINGTON, D. C. 32 pp. [Washington, D. C. 1936.] [Mimeographed.] Personnel of the conference; list of persons in attendance; conclusions. Discussion relates to speed, compulsory inspection, enforcement of laws, drivers' license law, and organizing for safety.

WEEKS, J. B.

(476)

RESPONSIBILITY OF STATE IN MOTOR VEHICLE SAFETY. Safety Engin. 68: 55-56. 58. illus. 1934.

Mentions the important divisions of State government which now deal with some aspects of highway-safety program in Pennsylvania. Author recommends creation of State commission of highway safety.

WESTERN SAFETY CONFERENCE.

(477)PROCEEDINGS OF THE WESTERN SAFETY CONFERENCE HELD IN SALT LAKE CITY UTAH, SEPTEMBER 21, 22, 23, 24, 1936. Unpaged. [Salt Lake City, Utah.] [1936.] [Mimeographed.].

Partial contents: Rounding the Curves, by R. C. Barr, 6 pp. (curve in graphic presentation of accident facts); Highway Safety-The New Dynamic, by Paul G. Hoffman, 5 pp.; Problems Encountered in the Attempt to Organize a State Safety Council, by J. F. Coombs, 7 pp.; Highway Accidents on Railroad Grade Crossings, by S. H. Osborne, 5 pp.; Safety Education in the Schools, by L. John Nuttal, Jr., 4 pp.

WILLIAMS, S. J.

(478)

ORGANIZING FOR SAFFTY. Natl. Research Council, Div. Engin. and Indus. Research, Highway Research Bd. Proc. (1936) 16: 234-238. [1937.]

"Organizing a State or a community for safety means bringing into systematic connection and cooperation the highway and traffic engineers. the police and courts, the schools and newspapers, the businesses and the civic groups—all as parts of a whole, to accomplish for the community what no one of them could do alone" (p. 234). WORLEY, J. S., and MORRISON, R. L., in collaboration with FRY, JOHN A. (479) A REPORT ON TRAFFIC ACCIDENT PREVENTION IN DETROIT. 60 pp. [Detroit, Police Commissioner?] 1936. [Multigraphed.]

Recommends creation of coordinating agency to study problem and have full power over accident policy, its administration to be by the various departments. Presents 5-year program for making physical improvements and inaugurating other needed reforms.

SCHOOL CHILDREN

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ACCIDENTS INVOLVING CHILDREN 16 YEARS AND UNDER, APRIL, 1931. Street Accidents 1 (1): 4. 1931.

Monthly reports and analyses of accidents involving children of 16 years and under, which, since 1926, have been prepared for use in the schools, are made a part of this publication (Street Accidents), published monthly by the Police Department, City of New York.

Shows ages of children and causes of accidents, and time of day accidents occur.

ARMY FOR SAFETY—SCHOOL BOY PATROLS: MANY HUNDRED THOUSAND YOUTHS ENLISTED; CITIES TESTIFY TO VALUE OF WORK. Pub. Safety 4 (4): 10-11, illus. 1930.

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DRAFT RULES FOR SCHOOL BOY PATROL UNIFORMITY: VARIOUS SPONSOR ORGANIZA-TIONS AGREE ON SET OF STANDARD RECOMMENDATIONS. Pub. Safety 4 (6): 11. 1930.

Considers legal aspect. Boys should stand on curb.

ENGLAND REVIEWS CHILD-PEDESTRIAN ACCIDENTS. Safety Ed. 16 (1, sec. 1): 8, 26, illus. 1936.

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NO MOTORS MENACE THEIR PLAY: BACK YARD PLAYGROUNDS IN FLINT HAVE BEEN HIGHLY SUCCESSFUL IN KEEPING CHILDREN OFF THE STREETS. Natl. Safety News 33 (4): 19, 64-65, illus. 1936.

SAFETY GATES FOR SCHOOL CROSSINGS. Amer. City 46 (5): 119. 1932. School traffic gate operated from position of security on sidewalks is reported to be in use in several Ohio communities.

(486)

SAFETY LESSONS CAN'T BE POSTPONED-SAYS DENVER. Safety Ed. 16 (1, sec. 1); 9-10, illus. 1936.

(487)

SCHOOL BUSES AND ACCIDENTS. Travelers Standard 21: 1-8, illus. 1933. How accidents happen; responsibility of school boards and officials; busses and their equipment; selecting and training drivers; safety meetings for drivers; keeping the passengers under control; school-bus inspection in Connecticut.

SCHOOL BUSES AND GRADE CROSSINGS. Travelers Standard 22: 21-23, illus. 1934.

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SIGNAL DEVISED FOR PREVENTING STOLEN RIDES. Safety Engin. 69: 204. 1935. Joining Nation-wide campaign to prevent accidents to children stealing rides behind motor vehicles, truck-fleet operators throughout the United States are adopting a new warning signal promoted by the Maryland Casualty Co., Baltimore.

ALLYN, M. Q. (490) SCHOOL SAFETY PATROLS—THEY'RE GROWING IN NUMBER AS THEY EXPAND SCOPE OF ALL-IMPORTANT WORK. Ohio Motorist 26 (11): 4-5, illus. 1934.

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BATTEY, A. D.

STUDENT ACCIDENTS. Safety Ed. 15 (3): 63, 71, illus. 1935.

DEMAROFF. R. C.

PROTECTION OF SCHOOL CHILDREN. Mich. Univ. Conf. Highway Engin. Proc. 16: 184–193. 1930. Also in Mich. Roads and Airports 27 (11): 32–33. 1930.

Results obtained in accident reduction around Flint, Mich.

DETROIT AUTOMOBILE CLUB, SAFETY AND TRAFFIC DIVISION.

THE CHILD AND TRAFFIC : HOW SHALL WE SAFEGUARD THEM? Written by H. O. Rounds. 12 pp. Detroit. Detroit Auto Club. 1928.

"This little namphlet is prepared with the thought of supplying in a concise and condensed form some of the methods which have proved successful in interesting the child in the thought of self-preservation" (p. 2).

FORNEY, R. L.

DANGER MONTHS FOR THE CHILDREN. Natl. Safety News 17 (5); 19-20, illus. 1928.

Twenty-three out of every one hundred persons killed by automobiles in the United States are children under the age of 15. From May to November there should be no let up in safeguarding the child on the street.

GREAT BRITAIN BOARD OF EDUCATION AND MINISTRY OF TRANSPORT. INTER-DEPART-MENTAL COMMITTEE ON ROAD SAFETY AMONG SCHOOL CHILDREN IN ENGLAND AND WALES. (495)

REPORT. 102 pp., illus . London, H. M. Stationery Off. 1936.

Increase in the number of road accidents to school children; causes of road accidents to school children; existing efforts for the promotion of road safety among school children; children's safety committees; protective measures for the safeguarding of school children from road accidents; sugdestinos on educative methods of promoting road safety among school children; summary of principal conclusions and recommendations.

NATIONAL SAFETY COUNCIL, INC.

CITTES WITH POLICE OFFICERS DETAILED TO SCHOOL SAFETY ACTIVITIES. 1 p. Chicago. 1931. [Mimeographed.] (Natl. Safety Council Pub. Safety Memo. 18).

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SCHOOL BUSES: THEIR SAFE DESIGN AND OPERATION. 11 pp. Chicago. c1933. The bus; bus routes and schedules; the driver; instruction for school-bus drivers: the bus patrols: instructions for pupils: inspections.

OHIO GOVERNOR'S SAFETY SERVICE COMMISSION.

(498)STANDARDS FOR THE OPERATION OF SCHOOL SAFETY PATROLS. [Sponsored in conjunction with the Department of Highways of Ohio. | 8 pp. Columbus. [1934?]

WILLIAMS, S. J.

(499)EDUCATION FOR SAFETY IN OUR SECONDARY SCHOOLS. Safety Ed. 16 (1, Sec. 1) : 6-7, 24-25, illus. 1936.

WOOD, M. T.

PLAYGROUNDS AS AN AID TO SAFETY IN PLANNING SUBDIVISIONS: RECREATION PLACES KEEP CHILDREN OFF THE STREETS AND OUT OF THE WAY OF DANGEROUS MOTOR VEHICLES. Nation's Traffic 2 (6): 31-32, illus. 1928.

WYMAN, M. M.

(501)HOW LOUISVILLE SAFEGUARDS HER CHILDREN. Safety Ed. 15 (1): 8-10, illus. 1935.

Discusses safety education and school-boy patrol.

ACCIDENT RECORDS AND REPORTING

ANONYMOUS.

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NEW LEGISLATION REQUIRES ACCIDENT REPORTS: STATES ENACT LAWS BASED ON SECTION 31 OF UNIFORM VEHICLE CODE. Pub. Safety 4 (3): 17. 1930.

Louisiana adopts section; reports required in Maine; Pennsylvania adds. to section.

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BAKER, J. S.

POLICE ATTACK TRAFFIC ACCIDENT PROBLEM: HOW THE BUREAU OF ACCIDENT PREVENTION OF THE EVANSTON, ILL., POLICE DEPARTMENT GOES ABOUT THE BUSINESS OF PREVENTING ACCIDENTS. Amer. City 42 (6): 121-124, illus. 1930.

DALTON, S. J.

HIGHWAY DEPARTMENT STUDYING TRAFFIC ACCIDENT RECORDS. Miss. Highways 3 (12): 6, 17. 1935.

FISK, C. C.

TRAFFIC ACCIDENT INDEXES. Inst. Traffic Engin. Proc. 3: 74-78, 86-87. 1932. [Mimeographed.]

Discussion, pp. 86-87.

Accident-hazard indexes for street intersections; for streets or portions of streets, for a city or district within a city, and for States or other large political subdivisions.

FORNEY, R. L.

HOW ARE YOUR REPORTS?: TRAFFIC ACCIDENT REPORTING, THE FOUNDATION OF ACCIDENT PREVENTING. BECOMES SIGNIFICANT WHEN STANDARD FORMS ARE USED. Nation's Traffic 2 (4): 20-21, illus. 1928.

STATES SHOULD HAVE ACCIDENT REPORTS. N. Dak. Highway Bull. 8 (10): 5. 1932.

Gives provisions of the North Dakota law pertaining to the reporting of accidents.

WH6, WHEN, WHY, WHERE, AND HOW? Pub. Safety 11 (4): 20, 22, illus. 1936.

Collection and intelligent use of traffic accident records are indispensable.

GREENSHIELDS, B. D.

NEW METHODS OF RESEARCH IN THE FIELD OF TRAFFIC ACCIDENTS. Inst. Traffic Engin. Proc. 7: 5-9. 1936. [Processed.]

Accident probability; photographic methods of research; training and testing automobile drivers; scientific analysis of accident statistics; operation of traffic research agencies.

KREML, F. M.

THE EFFECTIVE PRESENTATION OF TRAFFIC CASES IN COURT. Inst. Traffic Engin. Proc. 5: 37-40. 1934. [Processed.]

Police need training; need for understanding police problems; need enforcement reforms.

Discussion by George Schlamp, giving a résumé of the procedure of the enforcement set-up in Detroit, pp. 30-40.

MCCROSKY, T. T.

A COMPOSITE INDEX NUMBER FOR QUANTITATIVE COMPARISON OF TRAFFIC ACCI-DENT STATISTICS. Inst. Traffic Engin. Proc. 3: 79-86, 86-87. 1932. [Mimeographed.]

Discussion, pp. 86-87.

Gives a method for measuring and comparing the annual or monthly traffic accident intensities of different cities or larger political areas.

MARSH, B. W.

USE OF ACCIDENT RECORDS. Mich. Univ. Conf. Highway Engin. Proc. 18: 189-228, illus. 1932.

Includes explanation of standard accident reporting systems.

NATIONAL SAFETY COUNCIL, INC.

STATE LAWS ON TRAFFIC ACCIDENT REPORTING. Rev. ed., 9 pp. Chicago. 1936. (National Safety Council Pub. Safety Memo. 79.)

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NATIONAL SAFETY COUNCIL, INC. STATISTICS SECTION. (514) PUBLIC ACCIDENT REPORTING. 62 pp., illus. [Chicago.] c1929. (Natl. Safety Council Pub. Safety Ser. 13.)

Sets forth those facts about accidents which should be collected and explains the methods and forms to be used, not only in the collection of the data, but also in their tabulation and analysis.

REEDER, E. J.

SAFEGUARDING THE COUNTRY ROAD: ADEQUATE ACCIDENT RECORDS THE MEANS OF IDENTIFYING DANGER SPOTS. Better Roads 3 (1): 21-22. 24. illus. 1933. Includes "collision diagrams" prepared by the Massachusetts Department

of Public Works and the Minnesota Department of Highways.

SIMPSON. H. S.

CASHING IN ON ACCIDENT RECORDS. Natl. Safety News 20 (5): 19-20, 93-94. 1929

Paper presented before the Public Safety Division, 18th annual Safety Congress.

STUPKA, P. J.

ACCIDENT RECORDS AT WORK. Inst. Traffic Engin. Proc. 2: 83-98, illus. 1931. [Mimeographed.]

"The purpose of this paper is to show how traffic accident records such as those made by the Police, by vehicle operators and by accident investigation squads, can be made to serve usefully in accident prevention work. Special emphasis is given to Police accident records because of their greater availability and more widespread use in cities."

TAYLOR, C. P.

A TRAFFIC OFFICER'S TRAINING MANUAL. 225 pp., illus. Chicago, National Safety Council. c1930.

References at end of chapter.

Nature of the traffic problem; control at intersections; parking problems; crowds, processions, fires, and disasters; headlights; mechanical defects and equipment; miscellaneous law-enforcement problems; handling of violators; prevention; accident report forms and investigations.

TRANSEAU, T. E.

TREATMENT OF COMPLAINTS AND REQUESTS RECEIVED BY A TRAFFIC ENGINEERING OFFICE. Inst. Traffic Engin. Proc. 4: 71-84. 1933.

Source and manner of receiving requests and complaints: subject of complaints and requests; obtaining reports; disposition of reports.

VEY, A. H.

THE TRAFFIC ENGINEER. Amer. Highways 15 (2): 7-9. 1936.

Activities or objects of traffic engineering; source of accident reports; periodic analyses; filing accident reports; use of accident records; State control of traffic.

ACCIDENT STATISTICS

ANONYMOUS.

EXPERIENCE PROVES VALUE OF LICENSING DRIVERS: STATES WITH STANDARD DRIVERS' LICENSE LAWS CONTINUE TO SHOW MORE FAVORABLE EXPERIENCE IN MOTOR VEHICLE DEATH RATES. Natl. Safety News 30 (2): 25-26, illus. 1934.

FEWER ACCIDENTS ON STATE HIGHWAYS: NUMBER LESSENS DURING QUARTER BUT FATALITIES IN TRAFFIC CRASHES SHOW INCREASE OF 8.2 PERCENT. Ariz. Highways 9 (8): 11, 20–21. 1933.

Comparative figures for 1932 and 1933 are given.

FLORIDA'S MOTORCAR FATALITIES. Fla. Highways 5 (6): 4. 1928. Comparative figures from 1918 through 1927 are given.

(524)HIGHWAY FATALITIES REACH LARGE FIGURES. S. C. Highways 1 (3): 4, 8, illus. 1930.

Highway accident statistics are given for the State of South Carolina.

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BIBLIOGRAPHY ON HIGHWAY SAFETY 53 (525)ANONYMOUS. MOTOR TRAFFIC ACCIDENTS IN BELGIUM. Permanent Internatl. Assoc. Road Cong. Bull. 17: 53-55. 1928. Statistics of motor-vehicle accidents. (526)MOTOR VEHICLE DEATHS ON HIGHWAYS AND STREETS IN IOWA TOTAL 283 DURING 1927. Iowa State Highway Comn. Serv. Bull. 16 (1-6): 8-9. 1928. Table, p. 8, gives accidents and fatalities on highways from 1916 to 1927, inclusive. (527)MOTOR VEHICLE DEATHS SHOW SEASONAL TRENDS: AUTOCIDES ARE FEWEST IN FEBRUARY AND REACH A MAXIMUM IN OCTOBER. Pub. Safety 5 (3): 7. illus. 1931. (528)1933 CRASHES TOOK 107 LIVES IN THIS STATE. S. Dak. Hiway Mag. 9 (2): 9. 1934 Motor-vehicle-accident statistics in South Dakota for the year 1933. (529)74 CITIES CITED FOR NO TRAFFIC DEATHS IN 1934. Amer. City 50 (4): 73. 1935. Third national traffic contest was held in 1934 by the National Safety Council. (530)SMALLER CITIES GROWING SAFER: NATIONAL SAFETY CONTEST FINDS NO DEATHS IN 138 CITIES; AGAINST 74 IN 1934. Amer. City 51 (4): 95. 1936. Describes the National Safety Council contest held in 1935. (531)STATISTICAL RECORD OF TRAFFIC ACCIDENTS IN SOME OF THE GREAT CITIES OF EUROPE. Permanent Internatl. Assoc. Road Cong. Bull. 18: 153. 1929. AMERICAN ELECTRIC RAILWAY ASSOCIATION. (532)ACCIDENT STATISTICS OF MOTOR BUS LINES OPERATED BY ELECTRIC RAILWAYS IN 1930: COMPARATIVE SUMMARY AND ANALYSIS OF THE ACCIDENT STATISTICS KEPORTED BY 72 BUS COMPANIES, OPERATED OR CONTROLLED BY ELECTRIC RAIL-WAYS, FOR THE YEARS 1930 AND 1929. Amer. Elect. Ry. Assoc. Bull. 371, 20 pp. New York. 1931. [Mimeographed.] Similar statistics for other years may be found in its earlier bulletins. (533)ACCIDENT STATISTICS OF ELECTRIC RAILWAYS IN 1930: COMPARATIVE SUMMARY AND ANALYSIS OF ACCIDENT STATISTICS REPORTED BY 107 ELECTRIC RAILWAY COMPANIES FOR THE YEARS 1930 AND 1929. Amer. Elect. Ry. Assoc., Bull. 370, 24 pp. New York. [Mimeographed.] Similar statistics for other years may be found in its earlier bulletins. AUTOMOBILE MANUFACTURERS ASSOCIATION, INC. (534)AUTOMOBILE FACTS AND FIGURES. 1937 ed., 96 pp., illus. New York. Auto. Manfrs. Assoc. [1937.] Published annually by the association. The association was formerly called the National Automobile Chamber of Commerce. "New data on highway safety work . . . have been included for the first time in this edition" (1936 ed., p. 1). Methods used in certain cities; highway-safety program; accident statistics; uniform laws; financial responsibility; safety glass and brakes; safety principles in manufacturing vehicles; list of organizations. - MOTOR TRUCK COMMITTEE. (535)

MOTOR TRUCK FACTS. 1935 ed., 48 pp., illus. New York. Auto. Manfrs. Assoc. [1936.]

Gross weight, dimensions and speed for vehicles operating on the high-ways, p. 34; synopsis of the Federal Motor Carrier Act, 1935, pp. 36-39; summary of State laws and commission regulations on hours of service of motor truck drivers, p. 40; 3.11 accidents per 100,000 miles average for motor trucks, p. 41; commercial vehicle accident trend better than for private automobiles, p. 42; motor transportation safest on basis of occupant mileage, p. 42.

MISC PUBLICATION 296. U. S. DEPT. OF AGRICULTURE

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D, U. IN	CIDENTI STRADALI AVVENUTI NELL'URBE NEL 1933. Strade 18 (6): 314-315 1936.
	Road accidents in the city of Rome in 1935.
BALTII RE	MORE SAFETY COUNCIL STATISTICAL COMMITTEE. (537) PORT OF THE STATISTICAL COMMITTEE FOR THE YEAR OF 1927 TO THE GENERAL CHAIRMAN, BALTIMORE SAFETY COUNCIL. 41 pp., illus. [1928.]
In	Cover title: Baltimore Today, 14,484 Traine Accidents, Killed 169—5,278 jured, and Tomorrow?
BATTE M	r, A. D. (538) DTOR VEHICLES ACCOUNT FOR MANY INDUSTRIAL DEATHS. Natl. Safety News 22 (2): 52, illus. 1930.
de m	Study of experience of six States show that industrial motor-vehicle aths covered by workmen's compensation amount to 6.6 percent of tota otor-vehicle fatalities.
Burea AN	U OF RAILWAY ECONOMICS. (539) X ECONOMIC SURVEY OF MOTOR VEHICLE TRANSPORTATION IN THE UNITED STATES BUR. Railway Econ. Spec. Ser. 60, 219 pp., illus. Washington. 1933. Motor vehicle accidents, pp. 101–109.
CALIFO	RNIA STATE DEPARTMENT OF MOTOR VEHICLES, BUREAU OF STATISTICS.
A	NUAL STATISTICAL REPORT, 1937: A COMPILATION OF OFFICIAL REGISTRATION GASOLINE TAX, TRAFFIC ACCIDENTS AND ENFORCEMENT DATA, AND RELATED MISCELLANEOUS STATISTICS. 59 pp., illus. Sacramento, Calif. 1937.
st. ea	This constitutes the seventh annual which has been issued, covering atistics for the year 1936 and including data of previous years. The rlier numbers have title "California Motor Vehicle Statistics."
M	(541) DTOR VEHICLE DEATH RATE BY STATES ON GASOLINE CONSUMPTION FOR 1929 4 pp., illus. Sacramento, Calif. 1930.
CALIFO	ORNIA STATE DEPARTMENT OF MOTOR VEHICLES, HIGHWAY PATROL. (542 WALYSIS OF MOTOR VEHICLE ACCIDENTS IN CALIFORNIA. Issued every a months. Sacramento, Calif. [Mimeographed.]
A	(543) STUDY OF THE LOCATION OF TRAFFIC ACCIDENTS IN CALIFORNIA DURING 1932 [13] pp., illus. Sacramento, Calif., 1933. [Mimeographed.] Similar statistics were published for 1931.
W	(544) HERE CALIFORNIA TRAFFIC ACCIDENTS HAPPEN. Motor Carrier 10 (3): 12 1931.
al or se	About one-half the traffic accidents occur at street intersections in cities oout one-quarter of the accidents between intersections in cities, abou ne-eighth occur on the public highway, and one-eighth occur at rural inter ctions, on curves, at railroad crossings, etc.
CANAD TRA TH	A DEPARTMENT OF TRADE AND COMMERCE, DOMINION BUREAU OF STATISTICS NSPORTATION AND PUBLIC UTILITIES BRANCH. (545) IE HIGHWAY AND THE MOTOR VEHICLE IN CANADA. Published annually Ottawa, Canada.
	Includes statistics on motor-vehicle accidents.
CONNE	CTICUT STATE DEPARTMENT OF MOTOR VEHICLES. (546)

STATISTICAL SUMMARY OF TRAFFIC ACCIDENTS CAUSED IN CONNECTICUT. Hartford, Conn.

This statistical summary is published annually by the department as a department bulletin, and has been issued as follows: 1924 (17); 1925 (28); 1926 (40); 1927 (53); 1928 (63); 1929 (72); 1930 (79); 1931 (85); 1932 (91); 1933 (14); 1934 (20); 1925 (38); 1936 (42). 1924-28 have title "A Year's Damage by Auto"; 1929-34 have title "Connecticut Motor Vehicle Statistica" Statistics."

CONNECTICUT STATE DEPARTMENT OF MOTOR VEHICLES. (547)STIDY OF MOTOR VEHICLE ACCIDENTS IN THE STATE OF CONNECTICUT, 1-8, 1923-31. By Richard Shelton Kirby. New Haven. Conn., Published for The Hartley Corp. by Yale Univ. Press. 1924-31. [The first study is in the Proceedings of a Conference on Motor Vehicle Traffic held under the joint auspices of Yale University and the State of Connecticut in New Haven, April 9, 10, and 11, 1924, pp. 3-31.1 SAFETY EDUCATION SECTION. (548)STATE SUMMARY OF MOTOR VEHICLE ACCIDENTS CALENDAR YEAR 1936. 12 pp. Hartford, Conn. [1937] [Mimeographed.] Statistics of personal injury accidents. - SAFETY PROMOTION SECTION. (549)A DETAILED STUDY OF THE TRAFFIC ACCIDENTS CAUSED IN CONNECTICUT DURING 1936, GIVING THE SUMMARY IN DETAIL AND COMMENTS REGARDING THE IMPOR-TANT PHASES OF THE SITUATION. 12 pp. Hartford, Conn. [1937] [Mimeographed.] DEACON, W. J. V. (550)MICHIGAN AUTOMOBILE DEATHS FOR 1933. Mich. Univ. Conf. Highway Engin. Proc. 20: 61-69, illus. 1934. Abstract in Mich. Roads and Airports. 31 (11): 40. 1934. DISTRICT OF COLUMBIA DIRECTOR OF TRAFFIC. (551)ANNUAL REPORT. Washington, Govt. Print. Off. Gives statistics of the motor vehicle accidents in the District. DUBLIN, L. I. (552)RISING TIDE OF ACCIDENTS: THE STORY OF ONE HUNDRED THOUSAND DEATHS. Safety Engin. 61: 275-278. 1931. An address before the second annual Greater New York Safety Conference, New York City, February 25, 1931. Children suffer most. Geographical differences in automobile deaths and the causes of automobile accidents are mentioned. FORNEY, R. L. (553)AUTOMOBILE ACCIDENTS, CITY AND COUNTRY. Natl. Safety News 18 (1): 38, 59, illus. 1928. Includes a graph showing the estimated automobile death rates (including collisions with heavier vehicles) 1918-27, by rural rate and city rate. GALLOWAY, C. W. (554)AUTO ACCIDENTS CAUSE DEATH EVERY 17 MINUTES; GRADE CROSSING CASUALTIES ACCOUNT FOR 7 PER CENT OF TOTAL; MANY STATES HAVE NO DRIVERS' LICENSE LAWS. Railroad Data 9 (18): 35. 1930. Excerpts from an address before the Associated Traffic Clubs of America. GREENWOOD, ERNEST. (555)WHO PAYS? 301 pp., illus. Garden City, Doubleday, Doran & Co., Inc. 1934. National economic waste is involved in accident situation. Organized safety movement is needed. GREAT BRITAIN MINISTRY OF TRANSPORT. (556)REPORT ON FATAL ROAD ACCIDENTS WHICH OCCURRED DURING THE YEAR 1935. 53 pp. London, H. M. Stationery Off. 1936. An article reviewing the report is published in Engineering [London]. 142: 230-231, 1936, under the title "Road Accidents in 1935"; also an article in Pedestrians' Assoc. Quart. News Letter 18: 1-5, 1936, under title "The Analysis of Fatal Road Accidents, 1935." The figures are based on reports turned in by police officers, who are required to state cause of accident. GREAT BRITAIN ROYAL COMMISSION ON TRANSPORT. (557)FIRST REPORT: THE CONTROL OF TRAFFIC ON ROADS. 54 pp. London, H. M. Stationery Off. 1929. Street accidents in Great Britain in years 1909 to 1928, p. 47; number of persons killed and injured in street accidents, 1926 to 1928, p. 48; analysis of causes of fatal motor accidents, p. 48.

HAYSTEAD, LADD.

NEW MEXICO HIGHWAY ACCIDENT STUDY FOR 1928. N. Mex. Highway Jour. 7 (2): 12-14, 16, illus. 1929.

HOWARD, R. R.

COMMERCIAL VEHICLES HAVE FEWER ACCIDENTS THAN PRIVATE CARS: STATISTICS SHOW DECREASE IN TRUCK AND BUS ACCIDENTS; FLEET OWNERS WORK FOR SAFETY. Motor Transportation 7 (9): 6-7, illus. 1932.

ILLINOIS DEPARTMENT OF PUBLIC WORKS AND BUILDINGS, DIVISION OF HIGHWAYS.

STATISTICAL SUMMARY-MOTOR VEHICLE ACCIDENTS IN STATE OF ILLINOIS. Issued monthly. Springfield, Ill.

Gives summary for the current month, and also a cumulative summary for the preceding months of the year.

IOWA MOTOR VEHICLE DEPARTMENT.

THE FOUR HORSEMEN OF THE HIGHWAY. [Compiled under direction of Mrs. Alex Miller, Secretary of State.] 8 pp., illus. Des Moines, Iowa. [1935] This Iowa automobile accident report—1934—lists the four horsemen of the highway, namely, the road hog, the drunken driver, excessive speed, and unsafe cars.

KANSAS STATE BOARD OF HEALTH.

KANSAS ACCIDENTAL DEATHS, 1934. 21 pp., illus. Topeka, Kans. [1935.] Motor vehicle accidents, pp. 18-21.

KILLICK, V. W.

CALIFORNIA SYSTEM OF COMPILING MOTOR VEHICLE ACCIDENTS STATISTICS. Calif. Highways and Pub. Works 9 (January): 13-15, 23, illus. 1931.

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WHAT IS NECESSARY TO REDUCE MOTOR VEHICLE FATALITIES IN CALIFORNIA? 13 pp. Sacramento, Calif. Highway Patrol. 1932. [Typewritten.]

Personal responsibility of a driver is the paramount issue in traffic accidents. The author discusses the drivers' "faults," mechanics involved, psychological principles involved, vital influence of time, question of rapid transit, and legislative influence.

LEE, M. C.

ACCIDENT FACTS FOR NORTH DAKOTA. N. Dak. Highway Bull. 7 (4): 6-7. 1930.

More deaths result from accidents than from any other cause. Tables show motor-vehicle accidents and actions of drivers at time of occurrence, 1927–29.

MCINTYRE, L. W.

(566)

(565)

REDUCING TRAFFIC FATALITIES IN PITTSBURGH. Mich. Univ. Conf. Highway Engin. Proc. 22: 41-57. 1936. Also in Mich. Roads and Construct. 33 (11): 6, 8. 1936.

From 1924 to 1930, adult fatalities increased and child fatalities decreased; 1930 to 1934, all fatalities decreased; 1935, adult fatalities increased sharply, child fatalities remained stationary. Appropriation for bureau of traffic planning was decreased, director dismissed, enforcement slackened, and the police officers' training school was abolished, etc.

MAURER, C. N.

ACCIDENTS ON THE STATE HIGHWAY SYSTEM. Badger Highways 4 (4): 45-47. 1928.

Table shows summary of accidents in Wisconsin, by causes, 1922–27. 1928. MILLER, E. V. (568)

ARIZONA ACCIDENT ANALYSIS FOR 1934. Ariz. Highways 11 (1): 11. 1935.

(569)

(567)

SUDDEN DEATH IN ARIZONA. Ariz. Highways 12 (2): 9, 19-20, illus. 1936. Comprehensive report of motor vehicle accidents in Arizona during 1935.

TRAFFIC ACCIDENTS IN ARIZONA. Ariz. Highways 11 (7); 15, 23, illus. 1935.

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MILWAUKEE SAFETY COMMISSION.

SEMIANNUAL REPORT OF THE MILWAUKEE SAFETY COMMISSION ON TRAFFIC AC-OIDENTS AND THEIR CAUSES, 1935. 19 pp. Milwaukee. 1935. [Mimeographed.]

MINNESOTA STATE DEPARTMENT OF HIGHWAYS.

ANALYSIS OF MOTOR VEHICLE ACCIDENTS REPORTED TO MINNESOTA DEPARTMENT OF HIGHWAYS, 1933. Unpaged. [St. Paul?] [1934?] [Mimeographed.]

Consists chiefly of tables of statistics, built up from accident reports turned in by "Highway Patrolmen."

MISSISSIPPI STATE BOARD OF HEALTH, DEPARTMENT OF VITAL STATISTICS. (573) MOTOR VEHICLE TRAGEDIES: 1935 DEATHS IN MISSISSIPPI. [8] pp., illus. Jackson, Miss. [1936.]

MISSOURI STATE HIGHWAY COMMISSION.

MISSOURI! SAFETY!! A MISS-A MILE-IN MISSOURI. ed. 2, 32 pp., illus. Jefferson City, Mo. 1935.

Gives statistics of automobile accidents in Missouri in 1934.

NASSAU COUNTY (N. Y.) EMERGENCY WORK BUREAU. (575) MOTOR VEHICLE ACCIDENT SUMMARY OF NASSAU COUNTY, L. I., FOR THE YEAR OF 1931. Prepared by the Traffic Accident Survey of the Nassau County Emergency Work Bureau. Mineola, N. Y. [1932?] Unpaged. [Mimeographed.]

Includes a vehicular traffic-flow-and-accident spot map.

NATIONAL SAFETY COUNCIL, INC.

THIS SLAUGHTER MUST STOP. Prepared for the Illinois Conference on Highway Safety Legislation by the National Safety Council. 16 pp., illus. Chicago. [1934].

Gives statistics of accidents in Illinois, with a plea for passage of a drivers' license law and financial liability law by 1935 legislature.

- STATISTICAL BUREAU.

(577)

ACCIDENT FACTS. 1937 ed., 96 pp., illus. Chicago, Natl. Safety Council, Inc. c1937.

"Each edition of Accident Facts (this is the seventeenth) is meant to serve two purposes—first, to present vividly, by illustrations and diagrams, the salient characteristics of the past year's national accident experience; second, to provide tables that serve as a year-round reference for detailed statistics.

"Accident Facts, published annually in May or June, contains accident statistics for the previous year and comparison with earlier years. A preliminary edition of the booklet, containing provisional data, is published each year in February. In addition to these annual analyses the information that is made available currently by cities, states, and other agencies is summarized each month in the National Safety News, Public Safety, and other publications of the National Safety Council" (p. 2).

NEBRASKA STATE DEPARTMENT OF VOCATIONAL EDUCATION, REHABILITATION DIVI-SION, comp. (578)

ANALYSIS OF NEBRASKA MOTOR VEHICLE ACCIDENTS. 9 pp. [Lincoln, Nebr. 1932?] [Mimeographed.]

"Compiled, at the request of the Attorney General of Nebraska, by the Rehabilitation Division of the State Department of Vocational Education from newspaper clippings of accidents occurring in Nebraska which were secured during 1930 from all issues of more than 400 weekly and daily Nebraska newspapers and supplied weekly to the State Department by The Nebraska Press Association."

NEW JERSEY COMMISSIONER OF MOTOR VEHICLES.

ANNUAL REPORTS. 28-30. 1933-35. Trenton, N. J.

Gives detailed statistics of motor vehicle accidents in New Jersey.

NEW MEXICO STATE HIGHWAY SERVICE BUREAU, COMP.

NEW MEXICO HIGHWAY ACCIDENT STUDY FOR 1929. N. Mex. Highway Jour. 8 (1): 51. 1930.

New Mexico State Board of Health accident figures, p. 49.

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58 MISC. PUBLICATION 296, U. S. DEPT. OF AGRICULTURE

NEW YORK STATE DEPARTMENT OF TAXATION AND FINANCE, BUREAU OF MOTOR VEHICLES. ANNUAL REPORTS. 1-11, 1924-35, Albany, N. Y., J. B. Lyon Co., Printers.

1925 - 36.

Includes accident statistics.

REPORT OF MOTOR VEHICLE ACCIDENTS IN NEW YORK STATE. Issued monthly. Albany, N. Y.

Gives summary for the current month, and also a cumulative summary for the preceding months of the year.

NORTH CAROLINA STATE HIGHWAY AND PUBLIC WORKS COMMISSION, DIVISION OF STATISTICS AND PLANNING. (583)

N. C. RURAL MOTOR VEHICLE ACCIDENTS, SUMMER—1936. Compiled by James S. Burch and P. G. Johnson. 10 pp. [Raleigh, N. C.] 1936. [Mimeographed.]

"The purpose of this effort is to study the incidence of rural motor vehicle accidents occurring in North Carolina during the months of June, July, and August of 1936; and to determine the relationship between accidents and highway situations."

OHIO STATE DEPARTMENT OF HEALTH, DIVISION OF VITAL STATISTICS. (584) REPORT OF FATAL ACCIDENTS FROM 1910 TO 1933. 22 pp., illus. Columbus. [1936?] [Mimeographed.]

Graph of death rate for automobile accidents, p. 9; death rate of automobile accidents per automobiles registered 1910–1933, p. 12; average rainfall, automobile accidents, gasoline consumption, 1926–1933, p. 13; percentage of deaths due to automobile accidents by age, periods 1911–1933, p. 14; deaths due to automobiles being hit by trains, street cars and interurbans 1924–1933, p. 15; place of automobile accidents, urban or rural, 1929–1933, p. 16; cause of automobile accidents by months, 1929–1933, pp. 18–19.

OHIO STATE DEPARTMENT OF HIGHWAYS, TRAFFIC BUREAU.

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STATISTICAL SUMMARY OF MOTOR VEHICLE ACCIDENTS ON STATE HIGHWAYS IN OHIO OUTSIDE MUNICIPALITIES. Issued monthly. [Columbus.]

Gives summary for the current month, and also a cumulative summary for the preceding months of the year.

O'MEARA, E. J.

WHEN "GOOD" DRIVERS TAKE THE WHEEL: STATISTICS SHOW COCKSURE DRIVERS RESPONSIBLE FOR MOST AUTOMOBILE ACCIDENTS. Wis. Highway Builder 3 (4): 9, 26-27, 1931.

Statistics of highway accidents in Wisconsin, 1921 through 1930.

PENNSYLVANIA DEPARTMENT OF REVENUE, BUREAU OF HIGHWAY PATROL AND SAFETY. (587)

STATISTICAL SUMMARY OF MOTOR VEHICLE ACCIDENTS. Issued monthly. [Harrisburg, Pa.]

- PHILADELPHIA CHAMBER OF COMMERCE, CITIZENS SAFETY COMMITTEE. (588)
 - PUBLIC SAFETY IN PHILADELPHIA: A FIVE-YEAR SURVEY, 1924-1928. 32 pp., illus. Philadelphia. 1929.

Cover-title: Philadelphia, America's Safest City.

Philadelphia's highway-accident situation and child fatalities on the highways are given.

PITTSBURGH DEPARTMENT OF PUBLIC SAFETY, BUREAU OF TRAFFIC PLANNING.

(589) FAR 1983 7 pp illus

PITTSBURGH'S TRAFFIC ACCIDENT TOLL DURING THE YEAR 1933. 7 pp., illus. Pittsburgh. 1934. [Mimeographed.]

Chart giving the statistics of motor-vehicle accidents by months, for years 1930-33, on cover page.

RHODE ISLAND DEPARTMENT OF TAXATION AND REGULATION, DIVISION OF MOTOR VEHICLES. (590)

ANALYSIS SUMMARY OF MOTOR VEHICLE ACCIDENTS. Published annually. Providence, R. I.

SCHOOR. VIRGIL.

LEHREN DER VERKEHRSUNFALLSTATISTIK—VERKEHRSREGELUNG UND VERKEHRS-ERZIEHUNG. Die Strasse 13: 715-718. 1936.

Gives information on traffic-accident statistics, traffic regulation, and traffic education.

[SOUTH CABOLINA STATE HIGHWAY DEPARTMENT.] (592)COMPARATIVE MONTHLY SUMMARY OF MOTOR VEHICLE ACCIDENTS OCCURRING ON STATE HIGHWAYS IN SOUTH CAROLINA (DECEMBER 1933). 2 pp. Columbia, S. C. [1934?] [Mimeographed.]

Gives total for the month and total to date. 1933, with comparative figures for 1932

SPRAGUE, RAY.

THE GRAND RAPIDS TRAFFIC DIVISION. Mich. Univ. Conf. Highway Engin. Proc. 20: 45-49. 1934. Also in Mich. Roads and Airports 31 (11): 38-40. 1934.

Accident report in Grand Rapids. Gives statistics from 1925 through 1933

TRANSIT ACCIDENT FREQUENCY DOWN 35 PERCENT IN SIX YEARS. Transit Jour. 77: 437-439, illus, 1933.

Studies made by the American Transit Association show a remarkable decrease in accidents with street cars and busses. Automobile collisions are by far the greatest hazard.

THE TRAVELERS INSURANCE COMPANY.

YOU BET YOUR LIFE! 36 pp., illus. Hartford, Conn. [1937.] [Processed.] "This booklet, the seventh in a series of annual publications, is distributed free in the interest of street and highway safety."-p. 1.

Earlier issues are published under the following titles: (1) Worse Than War! 47 pp., illus. [1931]; (2) Tremendous Trifles. 51 pp., illus. [1932]; (3) They Call Us Civilized. 55 pp., illus. [1933]; (4) The Great American Gamble. 55 pp., illus. [1934]; (5) Thou Shalt Not Kill! 54 pp., illus. [1935]; Live and Let Live. 39 pp., illus. [1936].

Presents statistics and pictures illustrating the traffic accident toll for the previous year and sets forth the causes and results of haste, bad manners, poor judgment, and recklessness on our streets and highways.

UNITED STATES DEPARTMENT OF COMMERCE, BUREAU OF THE CENSUS. (596)MORTALITY STATISTICS, 1934, 35TH ANNUAL REPORT, RATE TABLES AND GENERAL TABLES FOR UNITED STATES, WITH SUPPLEMENTAL STATISTICS FOR HAWAII. PUERTO RICO, AND VIRGIN ISLANDS. 329 pp., illus. Washington, D. C. 1936.

Similar statistics published annually by the Bureau.

Deaths from all motor-vehicle accidents in the registration area of the United States: 1931-1934, pp. 9-11. Lists all motor-vehicle accidents; automobile (excluding train and street car collisions); automobile accidents in collision with railroad trains and with street cars; motorcycle accidents.

(597)SUMMARY OF MORTALITY FROM AUTOMOBILE ACCIDENTS. ANNUAL SUMMARY FOR 1936: NUMBER OF DEATHS AND PERCENT CHANGE FOR 131 CITIES. 4 pp. Washington, D. C. 1937. [Processed.]

Similar statistics published annually by the Bureau.

Report of deaths from automobile accidents in S5 major cities [the number varies] are also published for 4-week periods during the year.

UNITED STATES INTERSTATE COMMERCE COMMISSION, BUREAU OF STATISTICS. (598) SUMMARY AND ANALYSIS OF ACCIDENTS ON STEAM RAILWAYS IN THE UNITED STATES SUBJECT TO THE INTERSTATE COMMERCE ACT, CALENDAR YEAR 1935. U. S. Interstate Commerce Comn., Bur. Statis. Accident Bull. 104, 98 pp. Washington, D. C. 1936.

Similar material published annually by the Bureau.

Highway grade-crossing accidents by causes; by States; by States showing kind of protection afforded at time of accident; by causes and kind of protection afforded at time of accident, pp. 11-14.

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STEPHENSON, C. A.

MISC PUBLICATION 296, U. S. DEPT. OF AGRICULTURE 60

UNITED STATES TREASURY DEPARTMENT, PUBLIC HEALTH SERVICE. (599)MORTALITY FROM AUTOMOBILE ACCIDENTS AMONG CHILDREN IN DIFFERENT GEO-GRAPHIC REGIONS OF THE UNITED STATES, 1930. By William M. Gafafer, U. S. Pub. Health Serv. Studies on the Fatal Accidents of Childhood 1. 8 pp. Washington, U. S. Govt. Print. Off. 1936.

Reprint 1763 from Public Health Reports 51: 1083-1090. August 7, 1936.

WHITFIELD, R. N.

MOTOR VEHICLE DEATHS IN MISSISSIPPI UP 35 PERCENT. Miss. Highways 5 (8): 14 1936

WILLIAMS, S. J.

WHAT WE MAY EXPECT AS THE FUTURE OF TRAFFIC ACCIDENTS. Inst. Traffic Engin. Proc. 3: 88-94, illus. 1932. [Mimeographed.]

Trend of accidents by types, 1927–31; trend of accidents by ages of victims. 1927-31: trend of accidents by types of vehicles, 1927-31; ages of drivers involved in accidents : general aspects and future possibilities.

WISCONSIN LEGISLATIVE INTERIM TRAFFIC COMMITTEE.

REPORT OF THE WISCONSIN LEGISLATIVE INTERIM TRAFFIC COMMITTEE SUBMITTED TO THE LEGISLATURE OF 1931. 20 pp. Madison, Wis., Democrat Print Co. [1931?]

Includes statistics of motor vehicle accidents and submits recommendations concerning the following subjects: (1) Stronger motor vehicle division; (2) drivers' license law; (3) separation of grade crossings; (4) end-walls and obstructions in the highways; (5) compulsory accident report-ing; (6) safety education in the schools; (7) mechanical condition of the car; (8) uniform traffic code; (9) speed; and (10) uniform color code for traffic guidance.

WYATT. HORACE.

(603)

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(602)

ACCIDENTS: WHY THEY HAPPEN, WHEN THEY HAPPEN, HOW THEY CAN BE MINIMIZED. Motor Transport 53: 172-175, illus. 1931.

Lists drivers' fatigue and effect of alcohol among the causes of accidents. Accident statistics are given for the motor transport service of a big German operating concern.

SAFETY FACTORS IN HIGHWAY DESIGN

HIGHWAY LOCATION AND DESIGN

ANONYMOUS

(604)BEDFORDSHIRE ROAD MAKING. 1 .- RECONSTRUCTION OF WATLING STREET (LONDON-HOLYHEAD ROAD, A. 5). Quarry and Roadmaking 40: 287-289, illus. 1935. Emphasizes importance and methods of "opening the view" at corners and turns.

(605)

COLOURED CONCRETE IN MODERN ROAD DESIGN. Highways and Bridges 3 (127): 10, illus. 1936.

Shows modern highways detailed model designed to illustrate many ways in which colored concrete can be used as safety factor. Segregation of traffic on highway is by means of colored areas.

(606)

EXTENSION OF WESTERN AVENUE: OPENING OF CYCLE TRACKS. Roads and Road Construct. 13: 12-13, illus. 1935.

Present effective width of road is 87 feet, providing twin carriageways 27 feet wide, separated by central reserve 14 feet wide and flanked by verges 9 feet 6 inches in width, one of which carries a 4 foot 6 inch footpath.

(607)

KERBS ON TRUNK ROADS. (Editorial) Roads and Road Construct. 83: 394. 1929.

Draws attention to danger of up-standing kerbs along country roads.

ANONYMOUS.

MODERN PLANNING AND DESIGN CHARACTERIZE NEW JERSEY HIGHWAY: POMPTON TURNPIKE, NORTHWEST OF THE NEWARK METROPOLITAN AREA, SHOWS FARSEE-ING LOCATION AND ROADWAY DESIGN PRACTICES AND INTRODUCES AN INNOVA-TION IN JOINT DESIGN WHICH PROVIDES STRENGTH FOR LOAD TRANSFER AND WATERTIGHTNESS. Engin. News-Rec. 113: 305-307, illus. 1934. Editorial, p. 310.

(609)

OHIO'S SAFETY EDUCATIONAL HIGHWAY AIDS DRIVER: MODEL ONE MILE STRETCH HAS ALL SAFETY DEVICES. Automotive Daily News 12 (2352): 16, illus. 1936

Describes the 1-mile stretch of heavily traveled Route 8 outside Canton. Ohio.

(610)

ROAD-SAFETY: COLOURED SURFACINGS IN SOMERSET. Roads and Road Construct. 14: 204. illus. 1936.

One-half of the road is covered with Cornish granite chippings, and the other half with Welsh granite chippings. These chippings have distinct and different colors.

(611)

ROAD SAFETY FROM THE DRIVER'S POINT OF VIEW, BY AN ENGINEER WHO DRIVES DAILY. Highways and Bridges 2 (74): 1, 10. 1935.

Problem of lighting; roundabouts and signals; psychological aspect.

(612)

- SAFETY FEATURES NEW YORK HIGHWAY IMPROVEMENT. Concrete Highways and Pub. Impr. 17 (2): 6-8, illus. 1936.
 - The Albany-Schenectady road is described.

(613)

SAFETY MEASURES ON NEVADA ROADS. Nev. Highways and Parks 1 (2): 6-10, illus. 1936.

(614)

TRAFFIC TROUBLES IN VARIOUS CITIES : HOW A NUMBER OF CITIES ARE ATTEMPT-ING TO SOLVE PROBLEMS OF NARROW STREETS, SHARP CURB CURVES, STREET LAYOUT, PARKING SPACES, AND OTHERS. Pub. Works 59: 119-120. 1928.

(615)

UNFIT FOR MODERN MOTOR TRAFFIC . . . IS THE \$15,000,000,000 U. S. HIGHWAY SYSTEM, WHICH BOOSTERS BRAG OF AS THE FINEST IN THE WORLD. BUT THE COUNTRY'S NO. 1 TRAFFIC MAN SAYS: "IF WE COULD APPLY ALL WE KNOW, WE COULD ELIMINATE 98 PER CENT OF ALL ACCIDENTS, PRACTICALLY ALL CON-GESTION." Fortune 14 (2): 85-92, 94, 96, 99, illus. 1936.

Accidents result from failure of drivers to avoid one or another of four basic types of friction: marginal, medial, internal-stream or intersectional. Advocates limited ways.

ADAMS, J. D.

(616)ELIMINATING DANGER HAZARDS ON OUR HIGHWAYS. Purdue Univ., Engin. Ext. Dept., Ext. Ser. 33: 19-27, illus. 1934. Excerpts in Public Safety 8 (5): 12-14, illus., 1934; Highway Mag. 25:202-203, illus., 1934, under title "Indiana Improves Its Roads for Safety."

Extension Series 33 constitutes the proceedings of the 20th annual road school, January 22-26, 1934.

Twenty percent of fatalities which occur on Indiana highways result from vehicles running into deep ditches and culvert headwalls. Campaign for wider shoulders and wider rights-of-way based on (1) that of giving employment to needy people, (2) added safety, (3) reducing cost of maintenance, (4) improved appearance, and (5) resulting benefit to farm adjacent to improved roadway.

(608)

ADAMS. J. D.

(617)LOOKING TO THE FUTURE. Purdue Univ. Engin. Ext. Dept. Ext. Ser. 35: 13-21 1935. Abstract in Outdoor Ind. 2 (1): 9, 26, 1935, under title "Future Development of Highways in Indiana Discussed at Road School."

Extension Series 35 constitutes the proceedings of the 21st annual road school, January 21-25. 1935.

Wider rights-of-way, divided traffic lanes, and rural electrification are cited as demanding consideration.

ALBRIGHT. C. C.

(618)

BUILDING SAFETY INTO THE HIGHWAYS. Purdue Univ. Engin. Ext. Dept. Bull. 20: 99-108, illus. 1929. Also in Roads and Streets 69: 105-108, illus. 1929, under title "Design and Construction Features That Make for Highway Safety.

Bulletin 20 constitutes the proceedings of the 15th annual road school, January 21-25, 1929.

(619)

CAN SAFETY BE BUILT INTO THE ROAD. Pa. Safety Cong. Proc. 1928: 205-209. 1928. (Pa. Dept. Labor and Indus. Spec. Bull. 19).

Résumé of practice in Pennsylvania.

ALDINGTON. H. E.

(620)

(621)

ROAD ENGINEERING IN RELATION TO THE SAFE MOVEMENT OF TRAFFIC. Jour. Inst. Transport 14: 192-220, illus. 1933. Extract in Surveyor and Munic. and County Engin. 83: 31-32. 1933.

Discussion, pp. 213-220.

Includes design of intersections, traffic signals, and traffic surveys. Chart. p. 195, shows maximum traffic capacities in numbered vehicles per 10 feet

of traffic lane.

AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIALS.

SAFETY ON THE HIGHWAYS. 16 pp. Washington. 1936. Also in Amer. Highways 15 (4): 1-3, 1936.

Location of highways; railroad crossings; where accidents occur: divided highways and elevated roads: traffic patrol: traffic regulation, road markers, and signs; code specifying gross weights, dimensions and speed of vehicles operating on the highways; safety in construction.

AMERICAN ROAD BUILDERS' ASSOCIATION, COMMITTEE ON HIGHWAY LOCATION, SUB-COMMITTEE ON VISIBILITY. (622)

[REPORT]. Amer. Road Builders' Assoc. Proc. 28: 211-218, illus. 1931. Discussion, pp. 217-218.

Classification of highways; distance required to bring vehicles to a standstill on varying grades; visibility requirements on three-lane highways; maximum safe speed for various degrees of horizontal curvature.

ARNOLD. J. N.

(623)LENGTH OF PAVEMENT REQUIRED FOR A CAR TO PASS A TRUCK OF MAXIMUM LENGTH. Engin. News-Rec. 111: 191, illus. 1933.

Chart is given for computing distance required to pass a truck.

BALDOCK, R. H.

(624)HIGHWAY DESIGN FOR SPEEDS UP TO 100 MILES PER HOUR: CURVATURE, SIGHT DISTANCE AND SUPERELEVATION ARE ANALYZED IN THEIR RELATION TO MAX-IMUM SAFE SPEEDS ON OREGON'S HIGHWAYS, WHERE MAIN TRAFFIC ARTERIES ARE DESIGNED FOR EXCEPTIONALLY HIGH SPEEDS. Engin. News-Rec. 114: 732-734, illus. 1935.

Editorial, p. 753.

BARNETT, JOSEPH.

(625)

SAFE SIDE FRICTION FACTORS AND SUPERELEVATION DESIGN. Natl. Research Council, Div. Engin. and Indus. Research, Highway Research Bd. Proc. (1936) 16: 69-80, illus. [1937.]

Discussion, pp. 78-80.

In part I about 900 road tests are reported, dealing with curvature, superelevation, and speed at which side pitch is first felt. The proposal is made in part II that highways be superelevated to counteract where possible all centrifugal force for a speed of three-quarters of the assumed design speed.

BATSON, R. G. C.

THE EFFECT OF THE ROAD SURFACE AND ITS MAINTENANCE ON ROAD SAFETY. Engineering [London] 142: 403-404, 434, illus. 1936.

Figures show sideways force and frictional coefficient speed curves. Tables give information regarding stopping distances, sideways-force coeffi-cient, and coefficient of friction at wheel. Also includes conspicuity, con-tinuity, surface irregularities, and the use of light-colored chippings in dark-surfaced roads.

BAUER, J. L.

SPEED WITH SAFETY. Manfrs. Rec. 99 (2): 59-61, illus. 1931.

Highway-grade-separation projects and traffic circles are being built to prevent accidents at intersections in New Jersey.

- and MARSH. B. W.

HIGHWAY TRAFFIC CONTROL: PROPER REGULATION SERVES THE ENDS OF UTILITY AS WELL AS SAFETY. Civ. Engin. 2: 767-773. illus. 1932.

Two papers presented before the Highway Division of the American Society of Civil Engineers in Atlantic City, October 7, 1932: Building Safety into the Rural Road, by J. L. Bauer, pp. 767–770; City Traffic Needs Engineering Attack, by Burton W. Marsh, pp. 770–773.

Based on New Jersey and Philadelphia experience. Includes approach roads to the George Washington Bridge and to the Holland Tunnel.

BENNETT, G. T.

(629)ROAD DESIGN AND ACCIDENT STATISTICS: REMOVAL OF DANGER SPOTS: FAULTY LAYOUT AND DEFECTIVE SURFACES: AN OXFORDSHIRE INVESTIGATION.

Surveyor and Munic, and County Engin. 87: 341-343, 1935. Also in Roads and Road Construct. 13: 110-112, 1935.

BIXBY, J. S.

WHAT CAN HIGHWAY ENGINEERS DO TO MAKE HIGHWAYS SAFER FOR MOTOR VEHICLES. Assoc. Highway Off. North Atlantic States. Proc. 7: 30-44. 1931. Also in Low Bidder 5 (5): 19-21, 23-27, 29. 1931.

The author discusses safe design, causes of accidents, especially bus and truck accidents, and traffic regulation.

BOEHLER, C. F.

ELEMENTS OF SAFETY IN HIGHWAY DESIGN. Mich. Manfr. and Financ. Rec. 44 (9): 47-48, illus. 1929.

Among the elements are avoidance of sharp curves, wide traffic lanes, proper highway intersections, and education of the public in highway safety.

BORRIES, VON.

HAFTUNG FÜR VERSCHULDEN DER WEGEBAUPFLICHTIGEN. Strassenbau 21: 467-475. 1930.

Shows the extent to which highway officials are personally responsible for safety of highways.

BRANT, F. H.

SAFETY, ECONOMY, AND ROADSIDE IMPROVEMENT. Better Roads 5 (4): 14-16, illus. 1935.

Divides roadside improvement into three classifications: (1) Structural stability, utility, and safety; (2) protection of the highway investment; (3) adding beauty and at the same time adding to the safety of travel.

BRESSEY, C. H.

HIGHWAY DEVELOPMENT IN RELATION TO SAFETY. Roads and Road Construct. 14: 170-171. 1936.

Extracts of a paper read at the National Safety Congress held in London, May 20-22, 1936.

Utility and safety of a highway depend largely on its "layout."

BROWN, V. J., and CONNER, C. N.

LOW COST ROADS AND BRIDGES. 544 pp., illus. Chicago, Gillette Publishing Co. c1933.

Visibility, pp. 98-106. Discusses three-lane highways, maximum safe speed for various degrees of horizontal curvature, visibility on vertical curves, visibility at intersections, danger warnings, and roadside obstructions.

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BRUCE, A. G.

EFFECT OF INCREASED SPEED OF VEHICLES ON THE DESIGN OF HIGHWAYS. Puh Roads 10 (1): 11-20, illus. 1929.

Table 1, p. 11, shows maximum legal speed limits in open country for 1918 and 1928.

Discusses width of surfaces, shoulders, right-of-way, sight distance, curves, grade, superelevation and widening, curbs, and intersections.

BURCH. J. S.

"BUILDING SAFETY INTO HIGHWAYS." 10 pp. Raleigh, N. C., State Highway and Pub. Works Commission. 1936. [Mimeographed.]

A radio discussion, sponsored by the American Road Builders' Association, Station WPTF; Raleigh, N. C., October 29, 1936, 8-8:15 p. m. In North Carolina 16 percent of rural accidents are attributable, at least in part, to unsafe highway layouts or conditions.

BURTON, V. R.

SAFETY AND SPEED ON DETOURS : CURRENT PRACTICE MAKES A MODERN BYPASS A "TEMPORARY ROUTE" INSTEAD OF THE SLOW, UNSAFE ROAD FORMERLY PIC-TURED AS A "DETOUR." Engin. News-Rec. 106: 16-18. 1931.

CASSINONE

DIE SCHUTZANSTALTEN AN DEN LANDSTRASSEN. Verkehrstechnik 31: 543-546. 1929

Safety features on rural roads are pointed out.

COBURN, R. W.

RECENT DEVELOPMENTS IN THE DESIGN AND CONSTRUCTION OF HIGHWAYS. JOUR. Boston Soc. Civ. Engin. 19: 281-292. 1932.

Presented at the meeting of the Boston Society of Civil Engineers, February 17, 1932.

Discussion, pp. 290-292.

Elimination of railroad and highway grade crossings; traffic circles; bypass routes; preliminary details of design; nonskid surfaces; low-cost secondary roads; concrete road construction; treatment of swamps.

COOK, F. C.

ROAD DESIGN AND ROAD SAFETY. JOUR. Inst. Civ. Engin. 2: 161-220, illus. 1936, Review in Roads and Road Construct. 14: 375, 1936, Abstract in Surveyor and Munic, and County Engin. 90: 569-572, 1936.

Discussion, pp. 191-220.

Analyses of accidents; design of roads; road intersections; road surfaces; bypasses; existing roads; street lighting; accident maps; road vehicles.

CROSBY, W. W.

SAFETY AND THE HIGHWAY MACHINE. Roads and Streets 79 (3): 48, 50. 1936.

Presents the following: Prescribing for the symptoms; protecting the pedestrian; insulating opposing traffic; the four E's.

- and Goodwin, G. E.

HIGHWAY LOCATION AND SURVEYING. 393 pp., illus. 1928.

Bibliography, pp. 381-393. Speeds and safety, pp. 41-48.

DAVIDSON, W. C.

(644)HIGHWAY SAFETY FROM THE ENGINEER'S VIEWPOINT. N. Mex. Highway Jour. 7 (2): 6-7, illus. 1929. Also in Pacific Street and Road Builder 24 (2 i. e. 3): 27-28, illus. 1929.

Elimination of grade crossings, dangerous curves, narrow bridges, and narrow cattle guards, erection of signs, and effective maintenance to prevent loose ridges of earth and gravel, are among safety precautions taken in New Mexico.

DENNIS, T. H.

BUILDING SAFETY INTO HIGHWAYS. Calif. Safety News 19 (3): 10. 1935.

Extracts from a paper presented at the Western Safety Conference. An examination of accident reports shows distinct possibilities of remedial action.

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DUFFY, EARLE.

ANOTHER STEP TOWARD HIGHWAY SAFETY: A PLANNED EXPRESSWAY; OVERHEAD CROSSINGS; PEDESTRIAN SUBWAYS AND OVERPASSES; AN EXAMPLE WORTHY OF ATTENTION BY CITY PLANNERS ELSEWHERE. Sci. Amer. 153: 298, illus. 1935.

Describes St. Louis' new expressway.

EAST. E. E.

BUILDING SAFETY INTO THE HIGHWAYS. Nation's Traffic 3 (5): 22-23. 1929. Also in Good Roads 72: 382-383, 386. 1929.

Paper read at the 6th annual Pacific Coast Safety Conference.

ECKELS, SAMUEL.

TRAFFIC-SAFE ROAD IS TODAY'S TASK: GREATEST OF MODERN HIGHWAY ENGINEER-ING PROBLEMS CENTER ON SAFETY CONSIDERATIONS—INACCURATE ACCIDENT STATISTICS ARE A HANDICAP TO SOLUTION—PRIMARILY SAFETY MUST BE BUILT INTO THE ROAD—RECULATION MUST ASSIST SAFE CONSTRUCTION AND MAIN-TENANCE. Engin. NewS-Rec. 106: 4-6. 1931.

Tables show number of accidents, number of fatalities, total economic loss, 1919-29; analysis of causes of Pennsylvania's accidents for 1929; effect of curves and grades in causing accidents.

FLYNN, J. T.

ROADS INTO THE FUTURE. Collier's 98 (21): 12-13, 69-72, illus. 1936.

Obsolescence of roads; bypassing of traffic; purpose and findings of planning surveys; five-point plan; paying the bill.

FRYER, E. H.

HIGH MINIMA FOR SAFE ROADS. 300 FT. WIDE, 50 FT. RESERVE, 60 FT. CARRIAGE-WAY. Highways and Bridges 3 (115): 1. 1936. Abstract in Mod. Transport 35 (914): 11. 1936.

From a paper read to British Association for the Advancement of Science, Blackpool, September 14, on "the application of science to the solution of road user's dangers and difficulties."

GIFFIN, H. W.

HIGHWAY DESIGN. Assoc. Highway Off. North Atlantic States Proc. 4: 19-31, 1928.

Discussion, by G. H. Henderson, pp. 24-31.

Influence of type of traffic; alinement and grade; banking of curves; traffic center lines; shoulders; pedestrians; crowns; width; intersections; aesthetics; concrete-pavement design.

SAFETY AND SAVING FOLLOW BYPASS ROAD CONSTRUCTION: EXPERIENCE FROM A SCORE OF EXAMPLES IN NEW JERSEY SHOWS INCREASING LOCAL SUPPORT AND GAIN IN TRAFFIC VOLUME, SPEED, AND SAFETY. Engin. News-Rec. 106: 12-15, illus. 1931.

GILCHRIST, GIBB.

HIGHWAY SAFETY THE PROBLEM FOR ROAD BUILDERS. Manfr. Rec. 105 (3): 35. 1936.

Editorial, p. 27.

GROVER, O. L.

BRIDGES OFFER MANY TRAFFIC HAZARDS: BAD ALIGNMENT LOCATIONS, INADE-QUATE GUARD RAILINGS, AND NARROW AND SLIPPERY ROADWAYS ARE AMONG MOST PREVALENT DANGERS. Engin. News-Rec. 106: 34-35, illus. 1931.

HADFIELD, W. J.

SOME FACTORS IN ROAD SAFETY. Highways and Bridges 2 (97): 11. 1936. The author divides the responsibility and has a word for the bus and the driver, and discusses constituents of a safe road, nonskid road, dressed surfaces, dirt, visibility, and uniformity as factors in road safety.

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SOME NOTES ON CURRENT HIGHWAY PROBLEMS. Highways and Bridges 1 (41): 7. 1935. Also in Roads and Road Construct. 13: 115–116. 1935.

Abstract of a paper read at a luncheon given by the Royal Automobile Club to county surveyors, March 7, 1935.

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MISC. PUBLICATION 296. U. S. DEPT. OF AGRICULTURE 66

HADFIELD, W. J.

SOME NOTES ON CURRENT HIGHWAY PROBLEMS-Continued.

Topics are road safety; slippery surfaces; surface colors and lighting: signs and signals; white lines; ribbon development; pedestrian crossings; duplicate carriageways and cycle paths; and removal of road defects.

HALSEY. M. N.

BUILDING SAFETY AND FACILITY INTO THE HIGHWAY. 10 pp., illus. New York, The Author, 1 Park Avenue. 1932. [Mimeographed.] Also in Amer. Road Builders' Assoc. Proc. 29 (Bull. 32): 30-46, illus., 1932; Assoc. Highway Off. North Atlantic States Proc. 8: 51-63, 1932; Pacific Street and Road Builder 31 (5): 25-26, 38: (6): 19-20, 36, 1932.

Width of lanes and roadway: curves and hills: surface of the roadway: which slow traffic to the outside lanes; raised medial strips or park-ways; making outside lanes usable; obtaining sufficient right-of-way; channelizing islands; rotary-traffic grade separations.

REDUCING RURAL HIGHWAY CONGESTION AND ACCIDENTS BY PROPER DESIGN. Amer. City 43 (6): 117-119, illus. 1930.

Medial strips or parkways; improved shoulders for parking; clearance from guardrail: dual type highways: attracting traffic to outer lanes: channelizing islands: grade separations.

HARPER, CURZON.

WHY NOT HIGHWAY TURN-OUTS? Surveyor and Munic. and County Engin. 73: 577-578, 1928.

Road demolition; county road dangers; driving and road conditions; turn-outs and sidings; road beautiful.

A reply under title "Highway Turn-Outs and Sidings" was published in Surveyor and Munic, and County Engin. 74: 12, 1928. Discusses use and abuse of sidings; utility of turn-outs; reckless driver.

HAUSSMANN, W.

ZWEI FLUCHTLINIENTAFELN ZUR BEURTEILUNG DER FAHRTECHNISCHEN EIGEN-SCHAFTEN VON STRASSENTÜCKEN. Verkehrstechnik 15: 423-425. illus. 1934.

Graphs are given for use in determining the technical properties of road sections. Tables show the relation between surface friction, vehicle speed. and braking distance, and the relation between road friction, speed, and radius of curve.

HAYSTEAD, LADD.

BUILDING SAFETY WITH SPEED INTO NEW MEXICO HIGHWAYS. Nation's Traffic 2 (7): 41, illus. 1928.

HINKLE, A. H.

(662)THE ENGINEER'S PART IN MAKING THE HIGHWAY SAFE. Amer. Soc. Civ. Engin. Trans. 94: 522-543. 1930. Abstract in Pub. Works 59: 395-396, 1928. Discussion, pp. 530-543.

The subjects treated are: Curves: grades: combined grades and curves: width of pavement and shoulders; sufficient right-of-way; slippery pavement surfaces; ditches and ditch slopes along the highway; railroad crossings; bridge widths; advertisements and other obstructions; warning signs.

(663)MAINTENANCE MUST KEEP ROADS SAFE. Engin. News-Rec. 106: 7-11, illus. 1931.

Maintenance includes preserving a smooth riding surface, preventing slippery surface, shoulder maintenance; cutting weeds and brush and trimming trees and shrubs; maintenance of signs, signals, and pavement markings; the relative development of the different parts of the highway; emergency work in clearing roads, directing, and aiding traffic during or after emergencies such as wind storms, floods, snow storms, and accidents.

HODGES, C. E., JR.

HIGHWAYS CAN BE MADE SAFE. JOUR. Amer. Ins. 13 (11): 23. 1936.

Excerpts from an address presented before the National Association of Mutual Insurance Companies, 41st annual conference, 1936.

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HOFFMAN, P. G.

ENGINEERS HAVE ACTIVE ROLE IN FUTURE HIGHWAY SAFETY. Jour. Soc. Automotive Engin. 39 (2): 13-15. 1936.

[Excerpts from paper presented at semiannual meeting, (Society of Automotive Engineers) White Sulphur Springs, W. Va., June 3, 1936.] Includes 10 rules for safe driving.

PLANNING HIGHWAYS FOR TRAFFIC REQUIREMENTS. Inst. Traffic Engin. Proc. 7: 1-4. 1936. [Processed.]

Chief cause of traffic problem, including safety and congestion, lies in maladjustment between driver, car, and highway. Ideal routes for 65 percent of traffic would practically solve the problem.

INSTITUTE OF TRAFFIC ENGINEERS, RESEARCH COMMITTEE.

CAPACITY OF TRAFFIC LANES. Inst. Traffic Engin. Proc. 5: 109-118, illus. 1934. [Processed.]

Tables give traffic-lane capacities as shown by various surveys; estimates show traffic capacity of various width roads including effect of street cars, suburban business centers, grades and curves, and sparsely settled areas.

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TRAFFIC CAPACITY OF INTERSECTIONS OF NARROW STREETS. Inst. Traffic Engin. Proc. 6: 100-105, illus. 1935. [Processed.]

Theoretical capacity; double-entry control; single-entry control; pedestrians; permissive moves: signal system; double and single entry intersections; offset and T or Y intersections.

JAMES, E. W.

HIGHWAY SAFETY. Engin. News-Rec. 114: 102-105, illus. 1935.

Highway intersection safeguards; separated roadways; provisions for walking and parking; clearance for loss of vehicle control; superhighway; use of signs and signals; driver and the vehicle.

THE ENGINEER AND HIGHWAY SAFETY. Inst. Traffic Engin. Proc. 5: 34-36. 1934.

JEFFREYS, W. R.

ENSURING SAFETY AND EFFICIENCY. Permanent Internatl. Assoc. Road Cong. Bull. 18: 136-137, 1929.

Camber and foundation. White line should be unnecessary on country highway. Author thinks high kerbstones are useless.

KINZER, J. P.

DIGEST OF "APPLICATION OF THE THEORY OF PROBABILITY TO PROBLEMS OF HIGH-WAY TRAFFIC." [Digest prepared by L. F. Rader for the Research Committee of the Institute of Traffic Engineers.] Inst. Traffic Engin. Proc. 5: 118-124, illus. 1934. [Processed.] Thesis (B. C. E.)—Polytechnic Inst. Brocklyn. 1933.

Space-time graphs; distribution curve of speeds; discussion of results.

KIRK, W. F.

HIGHWAY SAFETY AS IT AFFECTS THE FARMER. All Ohio Safety Cong. Proc. 6: 219-222. 1935.

Shoulders wide enough on which to park or drive farm tractor are recommended.

LAWTON, E. C., [and others].

INCREASING THE SAFETY OF HIGHWAYS: THE ENGINEER'S PART IN DESIGNING, CONSTRUCTING, AND MAINTAINING THE ROAD SYSTEM AND REGULATING TRAFFIC. Civ. Engin. 5: 143-157, illus. 1935.

Abstract of the reports of four authors presented before the joint meeting of the Construction and Highway Divisions, of the American Society of Civil Engineers, January 16, 1935.

Design Principles and Travel Speeds, by E. C. Lawton, pp. 143-147; Uniform Traffic Code for Highway Safety, by A. B. Barber, pp. 147-151; Separation of Ways, by Robert H. Ford, pp. 151-154; Prevention of Highway Accidents, by Joseph J. Darcy, pp. 154-157.

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LOBECK. R.

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UNTERSUCHUNGEN ÜBER WESENTLICHE TRASSIERUNGSELEMENTE BEI SCHNELL-VERKEHRSSTRASSEN. Die Betonstrasse 10: 133-137, illus. 1935.

Includes investigation of the essential elements of location in fast traffic roads, ascertainment of the speed limit and its meaning, coefficient of friction, sight distance, and fundamental knowledge and conclusions.

LOS ANGELES COUNTY, BOARD OF SUPERVISORS, REGIONAL PLANNING COMMISSION. (676)

A COMPREHENSIVE REPORT ON THE REGIONAL PLAN OF HIGHWAYS, SECTION 2-E, SAN GABRIEL VALLEY. 138 pp., illus. Los Angeles. 1929.

Engineering factors in the highway plan, pp. 17-26.

Population trends and highway design; sight distance and highway design; present practices of corner treatment; intersection studies.

MCCLINTOCK, MILLER.

NATIONAL STANDARDS WILL HELP REDUCE TRAFFIC TOLL. Indus. Standardization 7 (1): 8-12. 1936.

The author sees answer in standardization, and improvement in safety design; speed is a factor in problem; operator failure constitutes a danger; we need safety inspection standard, and uniform highway signs. Infinite variety should be replaced by standard.

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WHAT AUTOMOTIVE ENGINEERS CAN DO ABOUT HIGHWAY SAFETY. Jour. Soc. Automotive Engin. 38 (4); 13-16, illus. 1936.

This paper was presented at the annual meeting of the society (Automotive Engineers), Detroit, January 14, 1936.

Traffic is a problem in physics; congestion prevents efficient use; marginal conflict; "limited way" is defined.

MAC DONALD, CHARLES.

"CONDITIONS AFFECTING TRAFFIC EFFICIENCY." Assoc. Highway Off. North Atlantic States Proc. 4: 77-94. 1928.

Discussion by G. G. Kelcey, pp. 86-90; by J. S. Bixby, pp. 90-94.

Design and construction, and use and control are given. Discussion brings out practice in New York.

MACDONALD, T. H.

THE TREND OF MODERN HIGHWAYS. 10 pp. Washington, U. S. Bur. of Public Roads, 1937. [Mimeographed.]

Paper presented at the 67th annual convention of the American Society of Civil Engineers, Detroit, July 21, 1937.

ROADS WE SHOULD HAVE. Amer. Automobile Assoc. Ann. Meeting Councillors 1936: 66-72. [1937.]

The author describes traffic conditions out of London and Paris and the national auto roads of Germany. Highway design affords greater safety to the motorist.

MCKEEVER, H. J.

DO YOUR ROADS MEET THE TEST OF NIGHT DRIVING? Highway Mag. 20: 182-184, illus. 1929.

Suggests driving over roads at night and checking up on surface visibility, pavement marking, signs and markers, shoulders and shoulder obstructions, and alinement.

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WHEN IS THE ROAD TO BLAME FOR ACCIDENTS—AND HOW? AN HONEST ANSWER TO THIS QUESTION IS NECESSARY BEFORE THE PROFESSION CAN FULLY DISCHARGE ITS OBLIGATION OF MAKING HIGHWAYS SAFER. Highway Mag. 19: 283–286, illus. 1928. Also in Ga. Highways 6 (12): 10–12, 1928.

Faulty grade is still with us. Is the cross section to blame? Slipping and skidding and maintenance responsibility are discussed. Safety survey is needed.

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MCLEOD. ANGUS.

PUBLIC SAFETY ASPECTS OF ROAD MAINTENANCE. Surveyor and Munic, and County Engin 86: 405-406 1934

Extract from a paper presented at the annual conference of the Highway Engineers Association of Scotland, 1934.

Control of traffic to give maximum facility of movement; control by re-striction; safe road surfaces. Economy is a factor in public safety.

MARDEN, C. F.

THREE PLANS FOR MAKING THE NEWBURYPORT PIKE & SAFEB ROAD. Nerba 12 (10): 7A-11A, 1933.

Suggested parallel routes; widening plan: 11 crossing separations; new road through city.

MATHESON, A.

DANGER SPOTS ; THEIR INVESTIGATION AND IMPROVEMENT. Roads and Road Construct. 14: 171-172. 1936.

Extracts of a paper read at the National Safety Council, held in London, May 20-22, 1936.

Experiments were carried out on a number of important roads with the blackest record of accidents.

MEEK. B. B.

BUILDING SAFETY INTO OUR HIGHWAYS. Motor Land 25 (1): 14, 34-35, illus. 1929

Considers those safety measures which are considered as a part of the routine of design, location, construction, and upkeep of California highways.

MILLER, E. V.

BUILDING SAFETY INTO THE HIGHWAY. Ariz. Highways 9 (4): 5, 22, 24. 1933. Curves, sight distances, and signs must be considered.

MORGAN, W. H.

SOME SAFETY PROBLEMS OF THE ROAD ENGINEER. Quarry and Road-making 38: 256-259. 1933.

Abstract of address before the National Safety Congress, held in London, May 24, 1933.

Analysis of direct traffic flow, i. e., channel flow; junction or transverse traffic flow; nonvehicular traffic (pedestrian), usually transverse.

MORRISON, R. L.

(690)THE EFFECT OF PAVEMENT WIDTHS UPON ACCIDENTS. Natl. Research Council, Div. Engin. and Indus. Research, Highway Research Bd. Proc. (1934) 14 (pt. 1): 69-78, illus. 1935. Also in Amer. Highways. 14 (2): 18-21. 1935.

Based on 1932 study of motor vehicle accidents which occurred in Washtenaw County, Mich., during 1931. Tables show accidents not affected and those affected by pavement widths.

(691)PRACTICAL MEANS OF BUILDING SAFETY INTO STREETS AND HIGHWAYS. Natl. Safety Council Trans. 17 (v. 3): 157-163. 1928. Also in Amer. City 39 (5): 111-112, illus., 1928; Natl. Safety News 18 (6): 34, 36, 1928; Good Roads 72: 151-153, 1929.

Discussion of three and four lanes for traffic safety. Emphasizes the need for separation of grades at intersections and the establishment of pedestrian subways.

MURROW, L. V.

STATE HIGHWAY SAFETY FEATURES IN WASHINGTON: A NEUTRAL ZONE DIVIDES DOUBLE LANE PAVEMENTS AND SODIUM VAPOR LIGHT EFFECTIVE EVEN IN FOG. Contractors and Engin. Monthly 32 (6): 1, 36, 44, illus. 1936.

NARBETH, R. G.

IMPROVEMENTS TENDING TO ROAD SAFETY. Surveyor and Munic, and County Engin. 87: 799-802, illus. 1935. Abridgement in Highways and Bridges 2 (55): 7. 1935,

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NARBETH. R. G.

IMPROVEMENTS TENDING TO ROAD SAFETY-continued.

The successful thesis for the Richard Pickering Gold Medal and Prize. 1935. Presented at the 62d annual meeting of the Institution of Municipal and County Engineers at Folkestone, June 26-29, 1935.

Features of design, signals and lighting, affecting pedestrians and vehicular traffic

NEVINS T. H. F.

NOTES ON HIGHWAY LOCATION. Commonwealth Engin. 24: 168-171. illus. 1936.

Visibility: curves: safety.

NYLANDER, AXEL.

TRAFIKSÄKERHETEN OCH BEBYGGELSEN. Svenska Vägföreningens Tidskr. 22: 303-313. illus. 1935.

Address before the Swedish Road Association annual meeting, May 31, 1935.

Discusses traffic safety and construction and includes intersections.

O'BRIEN, A. E.

THE BASE OF THE HIGHWAY SAFETY TRIANGLE. Highway Builder 15 (10): 9-11, illus. 1936.

This article was presented as a radio broadcast in the interest of highway safety.

Soft shoulders, dangerous curves, narrow bridges, and limited visibility result in far more accidents than hazards that virtually shout "danger" to the motorist.

O'MEARA, E. J.

BUILDING SAFETY INTO THE HIGHWAYS. Pub. Safety 8 (1): 16-18. illus. 1934.

OVERFIELD, H. V.

ROAD SAFETY FROM FIRST PRINCIPLES. Highways and Bridges 2 (88): 7, illus; (90): 5; (91): 7; (95): 7, illus. 1936.

Part I discusses vehicle tracks; road intersections; roundabout; traffic lanes on wide carriageways; continuous white lines; dual carriageways; part 2. length of vision; horizontal and vertical curves; speed; superelevation; part 3, road surfaces; driving at night; the eye; headlamps; curving roads; street lighting; part 4, improving traffic flow; standing vehicles: pedestrians: obstructions.

PENNYBACKER, J. E.

FOOL-PROOF ROADS: PRESENTING IDEAS IN SAFETY WHICH ENTER INTO THE DESIGN AND CONSTRUCTION OF MODERN HIGHWAYS. S. Dak. Hiway Mag. 7 (6): 10-12, illus. 1932. Also in Canad. Engin. 63 (6): 11-13, illus. 1932.

From the Connecticut Motorist.

POTTER, W. B.

BANKING HIGHWAY CURVES. (Letter.) Engin. News-Rec. 111: 327. 1936. Accidents on highway curves show greater proportion of deaths to number of accidents than any other road location with exception of railroad crossings. Gives rule for superelevation.

PURCELL, C. H.

(701)DESIGN OF HIGHWAYS FOR TRAFFIC SAFETY : SAFETY IN DESIGN DEPENDS UPON PROPER ROUTE SELECTION, AND THE ADJUSTMENT OF PAVEMENT WIDTHS, CURVATURE AND GRADIENTS TO LOCAL CONDITIONS. Engin. News-Rec. 106: 22-27, illus. 1931.

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Building safety into highways; design and use of control, warning, and directional devices in California.

TRAFFIC CONTROL AND DIRECTION. West. Assoc. State Highway Off. Rept. Ann. Meeting 1930: 33-37. 1930. Also in Pacific Street and Road Builder 28(2): 25-26, 48. 1931.

RADER. L. F.

(703)SAFETY FACTORS IN HIGHWAY DESIGN, PRESENTING A RÉSUMÉ OF THOSE FEATURES OVER WHICH THE ENGINEER HAS CONTROL. Civ Eugin 6: 364-368 illus. 1936

Condensed version of paper prepared by Rader and delivered by H. P. Hammond before the Society for the Promotion of Engineering Education at Atlanta, Ga., on June 25, 1936.

Problem of the three-lane highway; limitations of horizontal and vertical curvature: highway signs and grade separations; providing for the safety of pedestrians: progress in lighting highways.

RASKOB. J. J.

MODERN MOTOR TRAFFIC. 35 pp. New York, Natl. Automobile Chamber of Commerce. [1929.] (Natl. Automobile Chamber of Commerce, Motor Transport Fundamentals, International Ser. Traffic).

Solution lies not in restrictive regulations but in reconstruction of streets in such manner as to make high-speed traffic possible without danger of accidents.

REEDER, E. J.

BUILDING SAFETY INTO OUR RURAL HIGHWAYS. Pub. Safety 7 (4): 12-14, illus. 1933.

Defines in general terms how far the State and county should go in safeguarding the rural highway.

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IMPROVING STREET AND HIGHWAY SAFETY BY BUILDING SAFETY INTO ROAD AND CAR. Iowa State Col., Highway Safety Conf. Proc. 1: 64-68. 1936. [Mimeographed.]

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SAFETY ON THE HIGHWAY. Amer. Road Builders' Assoc. Proc. 33: 281-290. illus. 1936.

The following points are taken up: What is a safe highway?; good accident records necessary; intersections; curves; hills; change in road widths; where pedestrian protection is needed; divided highways; highway lighting: keying safeguarding to accident records.

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WHAT ARE SAFE HIGHWAYS ?: IN BUILDING SAFETY INTO THE HIGHWAYS IN-CREASING VEHICULAR SPEEDS MUST BE CONSIDERED. Natl. Safety News 19 (4): 21-22, illus. 1929.

ROBERTSON, A. W.

SLOW TRAFFIC BY-PASS FOR TWO-LANE HIGHWAYS. (Letter to editor.) Civ. Engin. 3: 695, illus. 1933.

Letters from H. D. Campbell in Civ. Engin. 4, p. 94, 1934, under title "Traffic By-pass of Value on Hills", and from W. E. Rice, 96, under title "Comments on the By-pass for Two-lane Highways." Article on same sub-ject in Amer. City 48 (12): 70, illus., 1933, entitled "To Facilitate Traffic on Two-lane Highways"; also in Amer. Highways 13 (2): 19, illus. 1934; letter from L. S. Tuttle in Amer. City 49 (1): 76, 1934, under title "The Slow Traffic By-pass Proposal".

ROWELL, CHESTER.

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CAN BOAD DESIGN MAKE HIGHWAYS COMPLETELY SAFE? An inquiry conducted by Chester Rowell, editor of the San Francisco Chronicle, with the help of Thomas H. MacDonald, Chief, Federal Bureau of Public Roads; Gibb Gilchrist, Texas State Highway Engineer; Charles H. Purcell, California State Highway Engineer; C. B. Treadway, Chairman, State Road Depart-ment, Florida; and J. D. Adams, Chairman State Highway Commission, Indiana, and broadcast Tuesday, December 8, from the San Francisco studios, National Broadcasting Co. 19 pp. Washington, D. C., U. S. Bureau of Public Roads. 1936. [Mimeographed.]

Presented during the convention of the American Association of State Highway Officials, San Francisco, December 1936.

72 MISC. PUBLICATION 296, U. S. DEPT. OF AGRICULTURE
Roys, F. W. (711) THE EFFECT OF ROAD CURVATURE AND SPEED ON THE SAFETY OF AUTOMOBILE OPERATION. Inst. Traffic Engin. Proc. 6: 87–93, illus. 1935. [Processed.] Banking of curves; vertical curves or knolls and depressions; over- turning; changing momentum too quickly; danger increases as the square of the speed; stored or kinetic energy, not power, is dangerous element; braking.
RUNDELL, E. A. (712) ROAD DESIGN FOR THE NON-PHYSICAL SEGREGATION OF OPPOSING TRAFFIC STREAMS. Surveyor and Munic. and County Engin. 88: 31–33, illus. 1935. Proposed cross-section, p. 32.
SAVAGE, D. G. (713) SAFER ROADS WILL REDUCE ACCIDENT DEATH TOLL. Safety Engin. 71: 151-152. 1936.
Lists some of the faults of existing highways and the points of highway design that should be incorporated in existing, as well as all new highways.
 SEGEBADEN, R. VON. (714) VARA VÄGAR UR TRAFIKSÄKERHETSSYNPUNKT. Svenska Vägföreningens Tidskr. 22: 284–302, illus. 1935. Report at the Swedish Road Association annual meeting in Örebro, 1935. Traffic censuses; technical road details; intersections; progressive development by widening and by adding bicycle paths and sidewalks; road edges; road markings; railroad crossings.
 SHEETS, F. T. (715) A CHALLENGE TO THE TRAFFIC ENGINEER. Inst. Traffic Engin. Proc. 6: 80–86. 1935. [Processed.] Intelligent operation of existing street and highway facilities; broad-gauged planning of rational highway programs; economic justification of highway improvements; actual pavement design.
(716) ECONOMICAL AND SAFETY ASPECTS OF CEMENT CONCRETE CONSTRUCTION. Canad. Good Roads Assoc. Proc. 21: 47-63, illus. 1934. Discussion, pp. 60-63. Lists the following safety aspects: (1) Accuracy of construction; (2) de- pendability; (3) durability; (4) skid resistance; (5) visibility.
SHERRARD, H. M. (717) HIGHWAY SAFETY AND THE ENGINEER. JOUR. Inst. Engin. Aust. 8: 261-264. 1936.
SHOEMAKER, CLIFFORD. (718) PLANNING FUTURE HIGHWAYS FOR SAFETY. Natl. Safety News 20 (4): 91-92, 127, illus. 1929

"The engineer whose responsibility it is to plan for the future must anticipate traffic development."

Before the third annual Central States Safety Congress, Kansas City, Mo.

SPINDLER, W. H.

HOW GREAT IS THE ROADBUILDER'S OBLIGATION IN INCREASING HIGHWAY SAFETY. Highway Mag. 19: 4-7, illus. 1928.

Motor vehicle vs. pedestrian; motor vehicle vs. railroad train; motor vehicle vs. motor vehicle; motor vehicle vs. highways.

(720)

(719)

VERTICAL CURVES-THEIR FUNCTION IN PROVIDING A SAFE AND GRACEFUL GRADE. LINE. Highway Mag. 19: 208-209, illus. 1928.

Length of vertical curve determines its ease or sharpness. The flatter approaching grades are, the shorter the curve needs to be; and the sharper the angle made by two approaching grades, the longer the curve needs to be.

STARK, C. W.

BUILDING SAFETY INTO THE HIGHWAYS. Manfrs. Rec. 95 (2): 65-68, illus. 1929.

Roadway widths; grades and curves; guardrails; signs. signals, and markings; railroad grade crossings; highway grade crossings.

STOECKEL, R. B.

ROAD BUILDING FOR THE AUTOMOBILIST. Amer. Highways 9 (1): 28-30. 1929.

Accident causation; effect of modern highway; strength requirements; predictions.

THE SIGHT LINE. 4 pp. Hartford, Conn., Dept. of Motor Vehicles. 1928. Also in Good Roads 71: 666-668. 1928.

State roads; city streets; the automobile; pedestrians' responsibilities.

TAYLOR, C. P.

FEWER ACCIDENTS ON FOUR-LANE ROADWAYS. Pub. Safety 7 (10): 14. 1933. Analysis shows relation of accidents to number of highway lanes; table showing comparative accident history of two-, three-, and four-lane highways.

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FTITING THE HIGHWAY TO TRAFFIC. 11 pp. [1934.] [Typewritten.] Paper delivered before the Society of Automotive Engineers, October 9, 1934.

TAYLOR, H. S.

ROAD SAFETY. Surveyor and Munic. and County Engin. 87: 683-684. 1935. Paper read at the meeting of the Nottinghamshire Surveyors' Association held at Nottingham, May 23, 1935.

Primary cause of road accidents; staggered crossings and islands; road markings; the "off-side rule"; superelevated corners, warning posts and white lines; relief of traffic density; traffic lights; future developments.

TITEL. W.

VERKEHRSGESTALTUNG UND VERKEHRSREGELUNG. Verkehrstechnik 23: 587-590, illus. 1933.

Traffic conditions and traffic regulation in Berlin; divided roadways; rotary traffic; bicycle roads; indication of traffic lanes (to date buttons preferred); highway lighting; traffic lights; and traffic officers.

TOMS, R. E.

ADEQUATE DESIGN REQUIREMENTS FOR PRESENT-DAY TRAFFIC. Amer. Road Builders' Assoc. Proc. 33: 259–274, illus. 1936. Also in Miss. Valley Conf. State Highway Depts. [Proc.] 28: 57–69, 1936; Amer. Highways 15 (2): 3–6, 1936; Mich. Roads and Construct. 33 (7): 4–6, 1936.

Essential elements that affect adequate design of roadway are speed, volume, width, length, and weight of vehicle. Other elements which must be taken into consideration are those which affect safety, comfort, and pleasure of travel.

(729) HIGHWAY SAFETY EXEMPLIFIED BY PROPERLY DESIGNED AND CONSTRUCTED HIGH-WAYS. Amer. Highways 16 (1): 10-15. 1937. Excerpts in Calif. Highways and Pub. Works, 14 (12): 25-27, 36, 1936, under title "Highway Has its Limitations in Contributing to Safety."

Paper presented during annual meeting of the American Association of State Highway Officials at San Francisco, December 1936.

TUCKER, HARRY.

(730)

HIGHWAY ENGINEERING AND ITS RELATION TO ACCIDENTS: THE ROAD AS A SAFE ENGINEERING STRUCTURE DEMANDS GREATER CONSIDERATION AS A FACTOR IN ACCIDENT OCCURRENCE THAN DO DRIVER PRACTICES. Engin. News-Rec. 108: 322-323. 1932.

Correction, p. 376. Editorial, pp. 308-309.

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MISC PUBLICATION 296. U. S. DEPT. OF AGRICULTURE 74

TUCKER HARRY SAFE TRAVEL ON HIGHWAYS THE ENGINEER'S OBLIGATION : REVIEW OF HIGHWAY ACCIDENT FREQUENCY AND HAZARD-STATEMENT OF THE ENGINEER'S RESPONSI-BILITY FOR SAFETY AND OF THE AGENCIES BY WHICH IT MAY BE EXERCISED. Engin, News-Rec. 113: 367-369, illus. 1934. Editorial, p. 378. Schematic chart indicating relation of the engineer to accident prevention on highways, p. 368. ULLMAN, WILLIAM. SUPER-SPEEDS ; SUPER-ROADS. Ohio Motorist 22 (10) : 10-11. illus. 1930. Safety factors in road design. UNITED STATES DEPARTMENT OF AGRICULTURE, OFFICE OF INFORMATION. HIGHWAYS WILL BE SAFER: DRIVER REMAINS A PROBLEM. Press Release. 2 pp. Washington, D. C. December 31, 1936. [Mimeographed.] Quotes Thomas H. MacDonald, Chief of the United States Bureau of Public Roads, in discussing the work that the State and Federal Governments are doing to make main highways safe under modern traffic conditions. VAN DYKE, WARREN. PENNSYLVANIA'S AMBITIOUS PROGRAM OUTLINED. Highway Builder 15 (1): 9-10, 24, illus. 1936. From an address before the annual convention of the Associated Pennsylvania Constructors, December 19, 1935. dangerous grades. Roads and Construct. 32 (11): 26, 28, 30. 1935. Discussion, p. 30. VEY, A. H. WATSON, J. P. and Munic. and County Engin. 83: 357-358. 1933. 1933. halts; parking facilities; roadside planting. WEIGELT, WERNER.

DIE HAFTUNG FÜR DIE VERKEHRSSICHERHEIT AUF ÖFFENTLICHEN STRASSEN. Asphalt u. Teer Strassenbautechnik 36: 654-656. 1936.

The responsibility for traffic safety on public roads: Discusses condition of road surface, break up caused by frost, wear through impact, removal of other hindrances, and appurtenances of the road.

WHEELER, J. W.

LACK OF COORDINATION BETWEEN HIGHWAY AND AUTOMOTIVE ENGINEERS. Amer. Highways 14 (4): 17-18. 1935. Excerpts in Outdoor Ind. 1 (11): 12, 14. 1934. Abstract in Civ. Engin. 5: 406-407, 486, illus. 1935.

Automotive engineer is away out in front in so far as design is concerned. Highway of yesterday is unfit for motor car of today.

The author discusses present-day speeds and index of road service demands.

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Gives special attention to the planning of arterial highways through. and adjacent to, congested areas, and the eliminating of sharp curves and

VAN WAGONER, M. D.

SPEED AND SAFETY FROM THE STATE HIGHWAY DEPARTMENT STANDPOINT. Mich.

Primary duty of highway engineer is to design, construct, and maintain highways so that they will be safe for reasonable high speed.

HIGHWAY IMPROVEMENTS ESSENTIAL FOR ACCIDENT REDUCTION. Assoc. Highway Off. North Atlantic States Proc. 12: 111-120, illus. 1936.

Accident severity; location of accidents; monthly distribution of accidents; daily distribution of accidents; accident causes; remedy.

SOME RANDOM REMARKS ON MODERN ROAD AND TRAFFIC PROBLEMS. SURVEYOR

Paper presented at Northeastern District Meeting of Institution of Municipal and County Engineers, held at Newcastle-upon-Tyne, March

Signposting; danger of kerbs; lighting; improvement of bus and tram

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WILLIAMS, J. A.

RECENT DEVELOPMENTS IN HIGHWAY SAFETY. Assoc. Highway Off. North Atlantic States Proc. 8: 42-51. 1932.

Uniformity in regulation; divided roads; traffic circles and clover leaves; islands to divide traffic at intersections; flood lighting; cautionary signs; traffic signals; alinement and grade; width; appearance.

WILLIAMS. S. J.

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(742)

CONTROL OF HIGHWAY TRAFFIC. Amer. Highways 15 (1): 20-22. 1936. Discusses safe design, traffic signals, enforcement, control of devices,

and safety education.

WILSON, T. U.

MAJOR HIGHWAY IMPROVEMENT SCHEMES IN LANARKSHIRE. Surveyor and Munic. and County Engin. 89: 615-617. 1936.

Widths of highway, built-up areas, dual carriageways, lay-out and construction, and bridges are described and typical lay-outs of effective standard widths, and typical cross-sections on two road schemes are included.

DIVIDED ROADWAYS

ANONYMOUS.

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DIVIDED HIGHWAY PROVES ITS WORTH: ONCE DANGEROUS TORREY PINES MESA ROAD IS NOW ONE OF SAFEST HIGHWAYS IN CALIFORNIA. Pub. Safety 8 (1): 9, illus. 1934.

FOUR-LANE RELIEF HIGHWAY. Contractors and Engin. Monthly 27 (1): 25-30, illus. 1933.

The 5.69-mile pavement from New Jersey State line north to Nyack-Suffern turnpike eliminates traffic congestion on west shore of Hudson River caused by the opening of the George Washington Bridge.

(745)

HIGHWAY THROUGH CITY RELOCATED IN NEW 200-FT. RIGHT OF WAY: ROAD THROUGH NEWBURYPORT, MASS., PLACED IN BLOCKS FORMERLY OCCUPIED BY OLD BUILDINGS—DIVIDED ROADWAYS, RIGID-FRAME AND CONTINUOUS GIRDER BRIDGES, CUT, FILL, AND RETAINING WALL WORK INCLUDED IN \$1,000,000 JOB. Engin. News-Rec. 114: 439-444, illus. 1935.

Gives design and cross-sections.

(746)

- INDIANA PLANS MODERN HIGHWAY WITH TRAFFIC LANES DIVIDED FOR SAFETY: SURVEY MADE ON SECTION OF ROAD 30 FORMING GATEWAY INTO STATE FROM CHICAGO AND THE NORTHWEST. Outdoor Ind. 2 (4): 19, 27, illus. 1935.
- JACKING A CENTER ISLAND INTO A FOUR-LANE ROAD. Engin. News-Rec. 115: 555 illus. 1935.

Longitudinal and transverse joints are broken, following which "jacking" operation is utilized to slide two lanes of pavement over until space for center island is provided.

(748)

LA ROUTE À GRAND TRAFIC DOIT-ELLE ÊTRE À CHAUSSÉE UNIQUE OU À DEUX CHAUSSÉES SÉPARÉES? Rev. Gén. des Routes 11:32-34, illus. 1936.

Should the heavy traffic road be a single roadway or two separated roadways?

(749)

NEW ERA IN ROAD CONSTRUCTION. Automobilist 16 (4): 6-7, illus. 1932. Approximately 25 percent of automobile accidents are caused by driving on wrong side of road or by cutting in or out of line. Four-lane highways with opposing traffic separated by grass plot would make it impossible to drive on wrong side of road.

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SAFETY FEATURES MAIN CONSIDERATIONS IN IMPROVEMENT OF ALBANY-SCHENEC-TADY ROAD IN ALBANY COUNTY. Roads and Streets 79 (1): 57-58, illus. 1936.

Separate streams of traffic in opposite directions with earth parkway and underpasses at each school.

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ANONYMOUS. (751) WEST SUSSEX ROADMAKING: DOUBLE CARRIAGEWAYS ON THE LANCING TO SHORE- HAM ROAD, A.259. Quarry and Roadmaking 40:344–346, illus. 1935. Gives details of design, placing, curing, and finishing of concrete surface.
ADAMS, J. D. (752) KEEPING THE PUBLIC INFORMED CONCERNING HIGHWAY TRANSPORTATION COSTS AND NEEDS. Amer. Highways 15 (1): 34–36. 1936. Extracts in Outdoor Ind. 2 (12): 14, 26, 1936, under title "Divided-Lane Highway Building by all States Urged as Safety Move."
CROSBY, W. W. (753) THE PARTING OF THE WAYS. Roads and Streets 79 (11): 27–28, illus. 1936. The traffic situation analyzed; three sources of highway traffic dangers; the ideal of the broad highway; separate roadways demanded, and what about the costs.
DOWNING, E. E. (754) DELAWARE BUILDS A DUAL HIGHWAY. Construct. Methods 12 (1): 43, illus. 1930.
In doubling width of 7½ miles of Du Pont Highway, the State highway department chose to build 20-foot strip of slab 50 feet from existing pavement at cost of \$360,000.
GRUMM, F. J. (755) DIVIDED ROADWAY DESIGN FOR MULTIPLE LANE HIGHWAY. Calif. Highways and Pub. Works 14 (12): 30-32, 38-39, illus. 1936.
JOHANNESSON, SIGVALD. (756) MOVING SEVEN MILES OF PAVEMENT TWELVE FEET SIDEWISE: CONCRETE SLAB 14-1/2 FEET WIDE SEPARATED FROM BORDERING SLAB IN 500-FOOT SECTION AND PUSHED SIDEWISE BY AIR PRESSURE TO FORM PART OF THE SECOND HALF OF A DUAL HIGHWAY IN NEW JERSEY. Engin. News-Rec. 115: 767-771, illus. 1935. Editorial. p. 791.
MURROW, L. V. (757) WASHINGTON MODERNIZES OBSOLETE SECTIONS OF MAJOR HIGHWAY; RECONDI- TIONING OF TACOMA-OLYMPIA LINK IN PACIFIC HIGHWAY FEATURES RECORD BRIDGE PROJECT ON NISQUALLY CUTOFF, INCLUDING 4,000-FOOT CONCRETE TRES- TIE. West Construct. 11: 63-65, illus. 1936. Double strip design features reconditioning of Pacific Highway
Noble, C. M. (758)

THE MODERN EXPRESS HIGHWAY. Amer. Soc. Civ. Engin. Proc. 62: 1013-1023, 1473-1485, 1644-1660, illus. 1936.

Discussion, pp. 1473-1485, 1644-1660.

Dual highway appears to be only type so far developed to accommodate successfully present high-type speeds with safety. Presents details of design of such highway for criticism and discussion. Emphasizes that design of highway should keep abreast or ahead of speeds of which vehicles are capable. Germany has under construction first unit of system designed for speeds of 115 miles per hour.

VEY. A. H.

(759)THERE'S SAFETY IN DIVIDED HIGHWAYS. Pub. Safety 7 (9): 18, 30. 1933.

Analyzes types of accidents that may be corrected by divisional islands.

INTERSECTIONS

ANONYMOUS.

ATTRACTIVE ROAD ENTRANCE BEAUTIFIES VILLAGE: STATE ROAD RELOCATION AND BRIDGE REPLACEMENT IN NEW HAMPSHIRE VILLAGE INVOLVE TAKING OVER LAND AND MOVING BUILDINGS TO PROVIDE BROAD PLAZAS AND TO PERMIT LANDSCAPING. Engin. News-Rec. 113: 212-214, illus. 1934.

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Includes road-intersection plan showing old and improved road alinement and grades and bridge relocation to ease approach curves and grades, sections of bridge showing rigid-frame design and roadway details; also, before and after bridge pictures.

ANONYMOUS.

BARRICADES ELIMINATE ACCIDENTS AT INTERSECTION. Amer. City 51 (8): 87, illus. 1936.

South Carolina State Highway Department practically eliminates accidents at one of its worst intersections. Barricades are erected so that they give appearance of closing-in on traffic as the intersection is approached.

(762) CROSS ROADS AND MEANS FOR REMOVAL OF DANGER. By Hydro. Surveyor and Munic. and County Engin. 75: 55-56, illus. 1929.

Reviews causes of danger on crossroads, types of crossroads, ineffective improvements, and visual distance.

(763)

CURB RETURN RADIUS AND BLOCK CORNER DATA: NEW TABLES PREPARED BY LOS ANGELES COUNTY, CALIFORNIA, TO AID ENGINEERS AND SUBDIVISION PROMOTERS. Amer. City 49 (5): 50-51, illus. 1934.

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ENGINEERING HALTS ACCIDENTS: SAFETY AT INTERSECTIONS. Pub. Safety 11 (1): 12. illus. 1936.

Intersection of Highways Nos. 66 and 77 near Oklahoma City.

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THE GERMAN MOTOR HIGHWAYS: PRINCIPLES OF DESIGN AND CONSTRUCTION. Highways and Bridges 3 (118): 1, 7-8, illus. 1936.

Illustrations show design of intersections and approaches to intersections.

GEVAAR DEFIGT IN DE BOCHT! DE Auto [Netherlands] 33: 4-6, illus. 1936. Danger menaces of the turn. Right and wrong ways of making turns at

LAY-OUT OF CROSS ROADS. Roads and Road Construct. 7: 370-372. illus. 1929.

From report of Town Planning Institute on Layout of Cross Roads, Junctions, and Corners.

(768)

PLANTING NEAR STREET INTERSECTIONS. Amer. City 47 (1): 68. 1932. Statistics of the Traffic Division, Seattle, Wash., indicate that 70 percent of traffic accidents throughout the city occur at street intersections or at intersections of streets and alleys. Shrubbery or untrimmed trees are responsible for many of these accidents.

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STRASSENKREUZUNGEN UND STRASSENQUERSCHNITT. By Zivilingenieur Ad. König VDI, Berlin. Verkehrstechnik 15: 241–243, illus. 1934.

Intersections and cross sections; rounding of corners and intersections; practical construction of road cross-sections. Diagrams show concave, roof-shaped, and arched profiles.

ALBRECHT, F.

street corners.

KREUZUNGSVERKEHR UND VORFAHRTRECHT. Verkehrstechnik 19: 363-365, illus. 1932.

Intersections and right of way. Diagrams show crossing with and without traffic circles.

AMERICAN AUTOMOBILE ASSOCIATION.

NORMAL SAFE APPROACH SPEEDS AT INTERSECTIONS; A REPORT PRESENTING, IN FORM FOR PRACTICAL USE, A METHOD FOR REDUCING ACCIDENTS BETWEEN VE-HICLES APPROACHING CERTAIN CORNERS WITH INADEQUATE VISIBILITY. Prepared by Burton W. Marsh and Edwin I. Stein. 48 pp., illus. Washington, D. C., Amer. Automobile Assoc. 1933. [Mimeographed.]

"This report was prepared from a more detailed analysis developed principally by the authors, as part of the work of the Philadelphia Office of Traffic Engineering, Department of Public Safety." (Note on title page.)

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AMERICAN ROAD BUILDERS' ASSOCIATION, DIVISION OF CITY OFFICIALS, COMMITTEE
CONTROL AND DESIGN OF MULTIPLE INTERSECTIONS. Amer. Road Builders'
Assoc. Proc. 29 (Bull. 32): 81–92, illus. 1932. Also in Roads and Streets 75: 201–206, illus. 1932.
Methods of control; design; circles; important features in design; advan- tages of rotary traffic; disadvantages.
(773)
RADII OF CURES AT INTERSECTIONS. AMER. Road Builders' Assoc. Proc. 29 (Bull. 32): 78-80, illus. 1932.
As the radius of the curb is increased the speed of the vehicles making the turn increases with a resultant rise in hazard and inconvenience to the pedestrian.
ABNTZ, WILHELM. (774)
ZUGÄNGE UND KNOTENPUNKTE DER REICHSAUTOBAHNEN. Autobahn 1934: 178- 183, 230-232, 266-268, illus. 1934.
Highway intersections and approaches to intersections. Diagrams show various types of design.
BEUTHEL, WALTER. (775)
FIRST COAST TRAFFIC CIRCLE-SUBWAY IMPROVEMENT COMPLETED AT FRESNO Calif. Highways and Pub. Works 10 (7): 2, 27, illus. 1932.
BLÖCKER, W. H. (776)
KREISLÖSUNG ODER LINIENLÖSUNG BEI AUTOBAHNKREUEZUNGEN. Autobahn 1934 268, illus. 1934.
Circles or lines are suggested as the solution of motor-highway crossings
BOUTTEVILLE, R. (777)
LA SUPPRESSION DES FORTIFICATIONS DE PARIS. Ann. Ponts et Chaussées 104 (t. 2, fasc. 5): 213-246, illus. 1934.
The author advocates abolishing the fortifications of Paris and gives a proposal for razing of the fortified wall, transformation of radial roads widening of the approaches and building circular boulevard around out skirts of city. Plans show improvement of intersections.
CANNING W S (778)
DOES THE BOULEVARD STOP ELIMINATE THE NECESSITY FOR TRAFFIC CONTROL IN SMALL COMMUNITIES? Pa. Safety Cong. Proc. 1928: 220-224. 1928. (Pa Dept. Labor and Indus. Spec. Bull. 19.)
Considers the theory and practice of the through street, its requirements and the obligations it imposes upon traffic at all intersecting streets and highways.
FOSTER W S (779)
DE-CELERATING INTERSECTION. Roads and Streets 75: 340, illus. 1932. Designed purposely with idea of slowing down traffic. The intersection
forms one of the south entrances to the Iowa State College campus.
GIBALA, J. T. (780)
A METHOD FOR RATING STREET INTERSECTIONS. Inst. Traffic Engin. Proc 7: 71-75. 1936. [Processed.]
Method is based upon the product of all the possible conflicting units at ar intersection in a given unit of time, the average peak hour.
GIFFIN, H. W. (781)
FREEWAY AT INTERSECTIONS: REGULATION OF THE FLOW OF TRAFFIC THROUGH IN PERSECTIONS DESIGNED TO MINIMIZE INTERFERENCE AND DELAYS, TO BE MOST EFFICIENT, MUST CALL FOR ORDERLY MOVEMENTS IN DIRECTIONS TAKEN NATUR ALLY BY THE DRIVER. Engin. News-Rec. 117: 514-517, illus. 1936.
Editorial, p. 556.

Figures show stop-and-go intersections with widened and flared approaches; circle intersections in which all crossings of traffic are at flat angles with all vehicles headed in same direction; grade separation with clover-leaf ramps; part clover-leaf ramps.

GOODBICH, E. P.

FACILITATING TRAFFIC FLOW AT STREET OR HIGHWAY INTERSECTIONS. Amer. Soc. Munic. Engin. Proc. (1930) 36: 21-25, 1931.

Ring boulevards: separation of grades: rotary traffic circles: "steadyflow" system: one-way streets: artificial control.

GRUEB. C. E.

(783)PART-TIME POLICE PROTECT RURAL INTERSECTIONS. Natl. Safety News 22 (2): 21-22, illus. 1930. Also in Pub. Safety 4 (8): 14-15, illus. 1930.

Special officers stationed at rural crossings in New Castle County, Del. have kept traffic moving and prevented many accidents.

HALSEY, M. N.

HANDLING TRAFFIO AT INTERSECTIONS. Mich. Univ. Conf. Highway Engin. Proc. 20: 37-45. 1934. Also in Mich. Roads and Airports 31 (11): 34-36. 1934

Rural highway intersections: urban intersections: details of pedestrian control at signalized intersections.

HEFRON, R. E.

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RURAL HIGHWAY INTERSECTIONS. Amer. Highways 15 (2): 14-16. 1936. Michigan rural highway intersections divided under two general categories, simple and involved; intersections are controlled by adequate signing. flasher lights, fixed time, semi- or full-actuated controls.

HILL, C. S.

FIELD OBSERVATIONS OF HIGHWAY PRACTICES: INTERSECTION DESIGN A PRIMARY HIGHWAY PROBLEM IN NEW JERSEY. Engin. News-Rec. 107: 834-838, illus. 1931.

Heavy Philadelphia-NewYork intercity traffic and pleasure travel to seashore resorts calls for many elaborate road-crossing structures. Flared intersections and grade separations, including the cloverleaf. Diagrams illustrate various types.

HILL, W. O.

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BYPASSES BOX THE COMPASS: AT SPRINGFIELD, MO., FOUR TRANS-COUNTRY HIGH-WAYS THAT CROSS IN THE CENTER OF THE CITY NOW AVOID INTERSECTIONS AND CONGESTION BY A RECTANGLE OF BYPASSES ON THE CITY OUTSKIRTS. Engin. News-Rec. 117: 47-49, ills. 1936.

HOLOUBER, FRANCISCO, and MAGLIOLA, J. A.

ESTUDIO DE CRUCES DE CAMINOS Y SU APLICACION EN EL CAMINO DE BUENOS AIRES A MAR DEL PLATA. Caminos 2: 59-67, illus. 1936.

Study of road crossings and its application to the Buenos Aires-Mar del Plata Road. Illustrations show design of intersections and roadside planting.

ILGNER. H. F.

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CHANNELIZING TRAFFIC ISLANDS: HOW MILWAUKEE IS CONTROLLING VEHICULAR FLOW AND INCREASING PEDESTRIAN SAFETY AT COMPLICATED INTERSECTIONS. Amer. City 51 (8): 43-46, illus. 1936.

INSTITUTE OF TRAFFIC ENGINEERS, RESEARCH COMMITTEE. (790)TRAFFIC CAPACITY OF INTERSECTIONS OF NARROW STREETS. Inst. Traffic Engin. Proc. 6: 100-105, illus. 1935.

JEFFREYS, REES.

ROAD CORNERS AND JUNCTIONS: THEIR DESIGN AND LAYOUT: HOW TO REDUCE CONGESTION AND ACCIDENTS. Permanent Internatl. Assoc. Road Cong. Bull. 17: 19-25, illus. 1928.

Reprinted from the Municipal Journal and Public Works Engineer of January 6, 1928.

JOHANNESSON, SIGVALD.

HIGHWAY ECONOMICS. 157 pp., illus. New York. McGraw-Hill Book Co. 1931.

Elimination of grade crossings with other highways, pp. 104-115.

Discusses the traffic circle, overpass, clover-leaf, and elevated highways. 26777°-38---6

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MACDONALD, T. H.

LOOKING TOWARD THE HIGHWAY FUTURE. Amer. Highways 16 (1): 4-7. 1937.

Paper presented before the twenty-second annual convention of the American Association of State Highway Officials, San Francisco, December 7. 1936

Presents recent developments in London, Paris, and in Germany. Conditions in the United States are dissimilar. Highways must provide for complete separation of local from through traffic by parallel service roads, and for separation of grades at major highway intersections.

MALCHER, FRITZ.

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ABOLISHING STREET TRAFFIC INTERSECTIONS WITHOUT GRADE SEPARATION: A STUDY OF HIGHWAY PLANNING AND TRAFFIC CONTROL TO MEET THE NEEDS OF THE MOTOR AGE. Amer. City 41 (3): 89–92.(4): 101–105, illus. 1929. Standard for curves; standards for the width of roadways; use of middle strips; parking; street crossing without intersection of traffic on one-way streets; street crossing without intersection of traffic on two-way streets with different density of traffic and with equal density of traffic.

(795)

ECONOMIC VALUE OF LAYING OUT ROADWAYS FOR UNINTERRUPTED TRAFFIC. Amer. Soc. Munic. Engin. Proc. (1930) 36: 27-48. illus. 1931.

The "steadyflow" system; street crossing without intersection of traffic and without grade separation; compared with synchronous stop-and-go traffic control.

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THE STEADYFLOW TRAFFIC SYSTEM. 91 pp., illus. Cambridge, Harvard Univ. Press, 1935. (Harvard City Planning Studies IX.)

Fundamentals of street lay-out for uninterrupted traffic; economic aspects; express highways under the steady-flow system; some specific ap-plications of steady-flow principles; 25 steady-flow solutions of typical traffic problems.

MEHEW, STANLEY.

5-YEAR PLAN IN STAFFORDSHIRE: SOME POINTS OF INTEREST. Highways and Bridges 2 (96): 7-8, illus.; (98): 7, illus. 1936. Also in Quarry and Roadmaking 41: 181–184, 222–225, illus. 1936.

Abstract of a paper prepared for a meeting of the West Midland District of the Institution of Municipal and County Engineers, held at Birmingham, England.

Through-traffic routes and bypasses; schemes of local improvement; weak bridges. Plates show detail of curbs and foundations; methods of superelevation; design of intersections.

MORGAN. H. P. H.

METHODS OF IMPROVING DANGEROUS CORNERS AND ROAD CROSSINGS. Good Roads. [Gt. Brit.] 6: 51-53, illus. 1930.

O'BRIEN, ROBERT.

HOW ACCIDENTS AT STREET CROSSINGS OCCUR: MANY LAWS NOT DIRECTED TOWARD UNKNOWN CAUSES WHICH GRADUALLY ARE BEING DISCOVERED. Nation's Traffic 3 (6): 26, 28, 1929.

OLDER. CLIFFORD.

SECURING TRAFFIC SAFETY AT INTERSECTIONS: REVIEW OF VARIOUS PRACTICES REVEALS NEED FOR EXERCISE OF FURTHER INGENUITY AND THOUGHT. Engin. News-Rec. 106: 28-29, illus. 1931.

Traffic circles promote safety but slow up traffic; standard signs always necessary; widened approaches warn of crossings; stop-and-go lights are useful, but they impede traffic; clover-leaf intersection safest of modern designs.

PARKER, BARRY.

(801) PROGRESS IN THE WYTHENSHAWE DEVELOPMENT NEAR MANCHESTER, ENGLAND. Amer. City 49 (5): 52-53, illus. 1934.

Shows design of radial and turbine road crossings.

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PORTER. J. P.

DETAIL DESIGN OF MAIN ROAD INTERSECTIONS. Surveyor and Munic. and County Engin. 79: 487-489, 509-512, illus. 1931.

Conditions governing design: lines of vision and stopping distances; examples of lay-out for vision and traffic conditions; detail design of contours; points in the design of a contoured road intersection.

POWELL, C. U.

SUPER-BOADS TO SERVE A PLEASURE-LAND. Engin. News-Rec. 110: 209-212, 251-255, 316-319, illus, 1933,

A series of three articles describing a system of superhighways in Queens Borough to provide gateways from New York City to the girdle of parkways embracing the beach, sports clubs, and resort areas of Long Island. The second and third articles have the following titles: Intricate Intersections on Queens Parkway System; Beauty of Design Sought in Queens Parkway Bridges. The parkway system of 24 miles requires 78 streetcrossing bridges and great variety of route arrangements for interchange of intersecting traffic.

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VARYING TREATMENT OF ARTERIAL PARKWAYS: HOW THE PROBLEM WITHIN URBAN LIMITS DIFFERS FROM THAT IN MORE OPEN AREAS. Amer. City 48 (5): 36-38, illus. 1933.

REEDER. E. J.

COLLISION DIAGRAM SHOWS NEED FOR POLICE SUPERVISION. Pub. Safety 4 (9): 14-15, illus, 1930,

Police supervision is needed in heavy cross traffic. A practical plan is suggested.

COLLISION DIAGRAM SUGGESTS UNUSUAL REMEDY. Pub. Safety 4 (7): 10-11. illus. 1930.

Applies to intersections.

SCHAD, B. T.

TRAFFIC CONTROL AT SIGNALIZED STREET INTERSECTIONS. 160 pp., illus. Gugler Lithographic Co. 1935. [Lithographed.] Diss. (D. Sc.) Mich. Univ. Evolution of traffic regulation: traffic officer control at intersections: automatic traffic-control signals; traffic signal colors; traffic-control signal systems; timing of traffic-control signals; traffic-actuated control; investigation of left-turning vehicles at signalized intersections.

SIMPSON, H. S.

ACCIDENT CLINIC. Natl. Safety Council. Trans. 20 (v. 3); 98-106, illus. 1931.

Discusses specific accident-prone intersections and analyzes the general causes of accidents at those points.

SOURS, H. G.

(809)

(808)

WIDENED INTERSECTIONS: SUMMIT COUNTY DEVELOPS INTERESTING DESIGN-ROADS WIDENED IN ALL DIRECTIONS FROM INTERSECTING POINTS-TRAFFIC SPEEDED UP AND SAFETY PROMOTED-PLAN USED ON BOTH PAVEMENTS AND TRAFFIC BOUND ROADS. Ohio Pub. Works 1 (8): 6-7, illus. 1928.

SPRINGER, G. P.

(810)PROMOTING HIGHWAY SAFETY BY ELIMINATING RIGHT ANGLE TURNS. Purdue Univ. Engin. Ext. Dept. Bull. 20: 94-98. 1929. Also in Nation's Traffic 2 [i. e. 3] (2): 11-12. 1929.

Bulletin 20 constitutes the proceedings of the fifteenth annual road school, January 21-25, 1929.

SWAN, H. S.

(811)

SEPARATING GRADES AT HIGHWAY INTERSECTIONS: EXPERIENCE TO DATE EM-PHASIZES ADVANTAGES TO BE GAINED AND PITFALLS TO BE AVOIDED. Civ. Engin. 3: 79-83, illus. 1933.

Traffic demand governs ramp type, for which there are 15 different possible arrangements. Illustrations show separations in New Jersey, New York City, and Westchester County, some of them four-leaf clover intersections.

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SWAN. H. N	

TRAFFIC CIRCLES AND ROTARY TRAFFIC: A SOLUTION FOR THE PROBLEM OF CON-GESTION AT EXISTING MULTIPLE STREET INTERSECTIONS. Civ. Engin. 2: 425-429, illus, 1932.

Points out advantages of various sizes and shapes of traffic circles and outlines conditions under which they are most effective.

Letter from Hawley S. Simpson in Civ. Engin. 2: 508-509, 1932, under title "Automatic Control at Traffic Circles."

THOMSON. T. F.

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(812)

SAFETY AT CROSSROADS : THE DESIGN AND LAYOUT OF GYRATORY TRAFFIC SYSTEMS. Surveyor and Munic. and County Engin. 90: 123-126, illus. 1936.

(814) SAFETY AT CROSSROADS : PRINCIPLES OF SAFE TREATMENT IN BUILT AREAS. SUFvevor and Munic. and County Engin. 84: 527. 1933.

SAFETY AT CROSSROADS: THE TREATMENT OF ROAD JUNCTIONS IN UNDEVELOPED AREAS. Surveyor and Munic. and County Engin. 83: 173-174, illus. 1933.

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DESIGN OF STREET AND HIGHWAY INTERSECTIONS. Pub. Roads 13: 73-88, illus. 1932.

Curb radii: splayed intersections: islands; rotary traffic: special designs without rotary principle; existing special designs; progressive development of an intersection.

USINGER and EWALD.

TUTTLE, L. S., and HOLMES, E. H.

BEISPIELE FÜR DIE EINFÜHRUNG VON ZUBRINGERSTRASSEN IN DIE REICHSAUTOBAHN. Strassenbau 26: 327-331, illus. 1935. Abstract in Road Abs. 3 (1); 2, 1936: Highway Research Abs. 1936 (32): 6, 1936.

Examples of junctions of auxiliary roads with the national motor highways. The German motor roads include junctions with auxiliary roads at intervals of from 61/4 to 121/2 miles. The design of the junction depends upon the importance of the road which crosses the arterial motor highway.

WALLBRIDGE, A. C.

DESIGN OF CROSS ROADS AND ROAD JUNCTIONS. Surveyor and Munic, and County Engin. 75: 465-466, illus. 1929.

Submitted for president's premium, 1928, and awarded second prize by the Association of Somerset Surveyors.

WATSON. HENRY.

DIVIDED STREETS AND ROADS. Roads and Road Construct. 12: 256-257. illus. 1934.

Methods of division; safety advantages and disadvantages.

GRADE SEPARATIONS

ANONYMOUS.

(820)BELT ROAD BEING BUILT AROUND ST. LOUIS: NEW ROUTE 77, DESIGNATED THE LINDBERGH HIGHWAY, FORMS A SEMI-CIRCLE AROUND CITY, TYING TOGETHER ALL HIGHWAYS FROM NORTH, SOUTH, AND WEST--FOUR GRADE-SEPARATION STRUCTURES BUILT, OTHERS UNDER WAY. Engin. News-Rec. 113: 723-725. illus. 1934.

Editorial. p. 734.

Map, pictures and drawings of grade separations are included.

(821)

CHİCAGO'S NEW DIAGONAL THOROUGHFARE: COMPLETION OF A 4-MILE LINK COSTING \$5,500,000 WILL CLOSE THE LAST GAP IN A 12-MILE AVENUE LEADING TO THE LAKEFRONT. Engin. News-Rec. 107: 952-956, illus. 1931.

(822)

DEPRESSES TRACKS FORMERLY ELEVATED TO ELIMINATE GRADE CROSSINGS: UNUSUAL PROJECT ON THE WABASH INCLUDED MORE THAN 16 ACRES OF SODDING AND THE REPLACEMENT OF AN 80-FT. SUBWAY WITH AN OVERHEAD BRIDGE. Railway Age 95: 359-363, illus. 1933.

Project at St. Louis. Intersection of Lindell and Union Boulevards designed as traffic circle.

ANONYMOUS.

- (823)HIGHWAY THROUGH CITY RELOCATED IN NEW 200-FT. BIGHT OF WAY: BOAD THROUGH NEWBURYPORT, MASS., PLACED IN BLOCKS FORMERLY OCCUPIED BY OLD BUILDINGS-DIVIDED ROADWAYS, RIGID-FRAME AND CONTINUOUS-GIRDER BRIDGES, CUT, FILL AND RETAINING-WALL WORK INCLUDED IN \$1,000,000 JOB. Engin, News-Rec. 114: 439-444, illus, 1935.
- LONDON IMPROVES TRAFFIC THROUGH CROWDED DISTRICT: STREET DIVERSIONS WITH ELEVATED ROADWAYS AND STEEL AND CONCRETE BRIDGES AND VIADUCTS ELIMINATE GRADE-CROSSINGS AND TRAFFIC CONGESTION IN THE DOCKS DISTRICT. Engin. News-Rec. 117: 111, illus. 1936.

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- LONG ISLAND'S TRAFFIC ARTERY AVOIDS ALL GRADE CROSSINGS: GRADE SEPARATION STRUCTURES CARRY 21 CROSS STREETS OVER 12-MILE SUPERHIGHWAY-ACCES-SORY FEATURES PROVIDED-PLACE 418,000 SQ. YD. OF CONCRETE SLABS. Concrete 41 (12): 7, illus. 1933.
- PENNSYLVANIA BUILDS 22 SUBWAYS IN 11 MILES OF LINE; ELEVATION OF ENGLEWOOD CONNECTING RAILWAY AT CHICAGO INVOLVES CONSTRUCTION OF AN UNUSUAL NUMBER OF STREET UNDERPASSES. Railway Age 95: 843-846, illus. 1933

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SPECIAL RAILWAY CHANGES AT OKLAHOMA CITY: GRADE-SEPARATION SUBWAYS DESIGNED TO EXPEDITE TRAFFIC AND EXCLUDE FLOODWATERS-NEW STATIONS AND FREIGHT TERMINALS BUILT-SEVEN MILES OF ONE RAILWAY DIVERTED. Engin. News-Rec. 108: 433-435, illus. 1932.

Subway can handle nearly 6.000 vehicles per hour in addition to street cars. Pedestrians are confined to sidewalks at higher level than roadway.

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- STRUCTURES FOR GRADE SEPARATIONS. Railway Age 98: 975-979, illus. 1935. Describes the various types of structures.
- BROOKLYN'S NEW ENTRANCE TO LONG ISLAND PARKWAYS: FIVE-MILE INTERBOR-OUGH PARKWAY LINK WITH GRAND CENTRAL PARKWAY TERMINATES IN A FOUR-BRIDGE GRADE-SEPARATION LAYOUT SUPERIMPOSED ON A COMPLICATED PATTERN OF BROOKLYN STREETS. Engin. News-Rec. 115: 871-874, illus. 1935
- COHEN. A. B. (830)THREE-LEVEL RAIL AND ROAD CROSSING: LAYOUT IN NEWARK, N. J., FEATURES A COMPACT COMBINATION OF STRUCTURES, INCLUDING A FLAT-SLAB RAILROAD ERIDGE OF UNIQUE DESIGN WITH A 32-IN. THICK SLAB IN PANELS 28X35 FT., A MAIN STATE HIGHWAY ON THE LOWEST LEVEL AND A PARK DRIVE CARRIED OVERHEAD ON A CONCRETE RIB ARCH HAVING SKELETON ABUTMENTS. Engin. News-Rec. 110: 179-183, illus. 1933. Editorial, p. 200.

(831)THREE-LEVEL CROSSING INVOLVES INTERESTING BRIDGES: UNUSED FLAT-SLAB STRUCTURE CARRIES LEHIGH VALLEY OVER NEW HIGHWAY, WHILE GRACEFUL CONCRETE ABCH SPANS TRACKS DIRECTLY ABOVE. Railway Age 94: 236-239, illus. 1933.

DISNEY, C. P.

NEW DEVELOPMENTS IN GRADE SEPARATION STRUCTURES. 11 pp., illus. Chicago. Portland Cement Assoc. 1934.

Reprinted from the Journal of the Western Society of Engineers, April 1934.

Interesting development in structures carrying railways over streets and highways. Discusses six types of design.

GIFFIN, H. W.

HIGHWAY GRADE SEPARATIONS. Canad. Good Roads Assoc. Proc. 22: 72-80, illus. 1936. Also in Canad. Engin. 71 (12): 3-5, illus. 1936.

Discusses the grade separations in New Jersey and the justification of grade crossings.

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GIFFIN, H. W.

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HIGHWAY SEPARATIONS AND OTHER SPECIAL INTERSECTIONS ASSOC. Highway Off. North Atlantic States Proc. 8: 194-205. illus. 1932.

Discussion by W. Frederick Welsch, pp. 204-205.

General comparison of types of intersections to be used at crossing of two four-lane highways, p. 202.

GOODKIND, MORRIS.

BRIDGE PROBLEMS ON MODERN HIGHWAYS. Assoc. Highway Off. North Atlantic States Proc. 7: 131–143. 1931.

Discusses location, foundation investigation and treatment, details of design and construction, economics of highway grade separations and aesthetic treatment of bridges.

KINGERY, ROBERT.

GRADE SEPARATION STRUCTURES UNTANGLE TRAFFIC JAMS: FOUR MAJOR TYPES OF GRADE SEPARATION STRUCTURES-LEAST EXPENSIVE WAY TO RELIEVE TRAFFIC CONGESTION-SIZE OF PROBLEM FACING STATE AND COUNTY HIGHWAY DEPART-MENTS-UNRAVELING LEGAL DIFFICULTIES IN ADVANCE. Concrete 37 (5): 17-19, illus. 1930.

KOON, S. G.

SCANT HEADROOM COMPLICATES GRADE-SEPARATION PROBLEM. Engin. News-Rec. 110: 58 illus. 1933.

On Queens Boulevard new subway under construction just below surface made it necessary and economical to build in grade separation as part of that job.

POWELL, C. U.

GRADE SEPARATIONS AT ARTERIAL HIGHWAY INTERSECTIONS Amer. City 39 (2): 137-139, illus. 1928.

The central roadway was depressed and widened to provide for service roadways in the Borough of Queens, New York City.

SCHLEMM, ROBERT.

ONE-WAY STREETS AND GRADE SEPARATIONS TO SPEED TRAFFIC. Engin. News-Rec. 108: 67, illus. 1932.

Author proposes scheme, called for identification the "four square" separation, for traffic-congestion relief in Chicago. Scheme consists of a checkerboard utilizing streets having no electric-car lines, with raised grade separations at important crossings.

SHERIDAN, A. V.

BRONN RIVER PARK WAY DRIVE COMPLETED: PROVIDES DIRECT CONNECTION BETWEEN NEW YORK AND WESTCHESTER PARKWAYS. Civ. Engin. 3: 676-680, illus. 1933.

Elimination of grade crossing in vicinity of Two Hundred and Thirtythird Street in The Bronx, New York. Involved in the project were a drive crossing over river, another under railroad carrying 300 trains a day, and a third serving to pass new drive under main highway, and protection of roadway against flooding river.

SHUPTRINE, H. A.

(841)

HIGH WAY GRADE SEPARATIONS : ENGINEERING PRELIMINARIES FOR JOINT MUNICI-PAL AND BAILROAD SOLUTION OF DANGEROUS TRAFFIC HAZARDS. Civ. Engin. 1: 1195-1200, illus. 1931.

TORKELSON, M. W.

(842)

(843)

ROAD-RAILWAY GRADE SEPARATION PROGRAM IN WISCONSIN ; PROGRESS AND COST OF ELIMINATING 76 RAILWAY GRADE-CROSSINGS IN WISCONSIN UNDERTAKEN AS AN UNEMPLOYMENT-RELIEF PROGRAM. Engin. News-Rec. 113: 661-663, illus. 1934.

Editorial, p. 667.

GRADE CROSSINGS

ANONYMOUS.

BUILDING SAFE HIGHWAYS. Concrete Highways and Pub. Impr. 16 (1): 6-7, illus.; (2): 4-6, illus.; (3): 7-10, illus. 1935.

Three problems are presented: (1) Rail-highway crossings; (2) planning and selection of grade separation structures; and (3) making our streets safe.

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ANONYMOUS.

CURRENT STATUS OF UNITED STATES WORKS PROGRAM GRADE CROSSING PROJECTS, (AS PROVIDED BY THE EMERGENCY RELIEF APPROPRIATION ACT OF 1935) AS OF DECEMBER 31, 1936. Pub. Roads 17: 281. 1937.

Table by States shows grade-crossing projects.

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- GRADE-SEPARATION PROBLEMS AND STRUCTURES AT COLUMBUS, OHIO: TWO BAIL-ROADS DIVERTED FOR BETTER GRADES AND FREIGHT TERMINALS-VIADUCT RE-QUIRED ACROSS STATE'S PROPERTY-DECORATIVE TREATMENT OF TRACK-ELEVA-TION BRIDGES. Engin. News-Rec. 107: 284-288, illus. 1931.
 - (846)
- GRAND TRUNK RELOCATION ON DETROIT-PONTIAC LINE: STATE PAYS FOR LAND AND CONSTRUCTION, TO BE REPAID IN 15 YEARS; HEAVY GRADING AND NUMEROUS BRIDGES; ELECTRIFICATION PLANNED. Engin. News-Rec. 109: 501-504, illus. 1932.

(847)

HIGHWAY CROSSING PROTECTION. Railway Age 98: 979-980, illus. 1935.

(848)

HOW ERIE HAS REDUCED HIGHWAY CROSSING ACCIDENTS. Railway Age 97: 215-217, illus. 1934.

Nine important features in program which effects 23-percent reduction include proper whistling, improvement of view, paving and care of roadway at crossings, additional crossing protection, better lights, advance warning signals, educational work in schools and clubs, and publicity in newspapers.

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MORE RISK OF CROSSING WHEN TRUCK OARRIES FLAMMABLES. Natl. Safety News 29: 38-39. 1934.

(850)

NEW FORM OF HIGHWAY CROSSING PROTECTION. Railway Age 97: 409-410, illus. 1934.

Protection consisting of barriers which rise up in the highway, 50 feet from the railroad track, was installed at the crossing of Indiana State Highway No. 130 with single-track main line of the Grand Trunk Western Railroad 2 miles west of Valparaiso, Ind.

NEW ROAD BYPASSES VILLAGE AND ELIMINATES RAILWAY CROSSING: LONG HIGH FILL AND A THREE-SPAN CONCRETE AND STEEL GRADE-SEPARATION STRUCTURE WITH CONCRETE SWAYBRACES IN THE STEEL SPANS BUILT BY MICHIGAN HIGHWAY DEPARTMENT. Engin. News-Rec. 108: 124-125, illus. 1932.

Describes railway-crossing elimination in Benzonia and Beulah, Mich.

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NEW YORK CENTRAL ELEVATES FIVE MILES OF TRACK THROUGH SYRACUSE: TRAINS TAKEN OFF MAIN BUSINESS STREETS FOR FIRST TIME IN 97 YEARS UPON COMPLE-TION OF EXTENSIVE TRACK ELEVATION PROJECT INVOLVING 31 BRIDGES, HEAVY FILLS AND NEW STATION ON THE WEST SHORE R. R. RIGHT-OF-WAY. Engin. News-Rec. 117: 881-886, illus. 1936.

Three types of steel superstructures were required, exclusive of overhead viaducts. Swamp land, peat bogs, and soft clay soil caused special foundation problem.

(853)

RAILBOAD AND HIGHWAY INTERSECTIONS. Travelers Standard 20: 45-54, illus. 1932.

Discusses the following: The State and the railroad; grade-crossing elimination; railroad employees; highway users are chiefly responsible for accidents.

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BAILROAD AND HIGHWAY INTERSECTIONS. Safety Engin. 63: 257-258, illus. 1932.

Includes graphic presentation of types of motor-vehicle accidents.

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OR.

RAILROAD GRADE CROSSING ELIMINATED ON STATE HIGHWAY SYSTEM, DURING THE PAST DECADE BY RELOCATION, OVERHEAD OR UNDERPASS. Amer. Highway 15 (1): 46. 1936.

Table by States is given.

(857)

RAILROAD GRADE-CROSSING STRUCTURES TO MEET EVERY REQUIREMENT. OANADIAN NATIONAL BAILWAYS HAS DEVELOPED SIX DIFFERENT DESIGNS IN CONCRETE AND ONE IN STEEL AND CONCRETE INCORPORATING SUCH INNOVATIONS AS PRECAST SLABS, BALLASTLESS DECKS, CONCRETE TIES, TIMBER CUSHION BLOCK AND LONG-SPAN RIGID FRAMES. Engin. News-Rec. 113: 65-70, illus. 1934.

(858)

THE "REMEDY" FOR GRADE-CROSSING ACCIDENTS. Travelers Standard 23: 115-120. illus. 1935.

It is desirable to eliminate all level crossings, but in the final analysis "Stop. Look. and Listen" is most effective remedy in majority of cases under present conditions.

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THREE-LEVEL GRADE SEPARATION AT CHICAGO: COMPLICATED INTERSECTION OF SEVERAL BAILWAYS ELIMINATED-TRACKS CARRIED OVER AND UNDER A STREET BRIDGE WHICH WAS REBUILT-PROJECT PLANNED AS A UNIT-WORK DONE UNDER HEAVY BAILWAY AND STREET TRAFFIC-SPECIAL STRUCTURES. Engin. News-Rec. 106: 731-734, illus. 1931.

AMERICAN INSTITUTE OF STEEL CONSTRUCTION.

SPECIAL REPORT ON HIGHWAY CROSSINGS. [8 pp.] New York. 1934. Summary of reports from the various States as to their programs is attached.

AMERICAN RAILWAY ASSOCIATION, SAFETY SECTION, COMMITTEE ON PREVENTION OF HIGHWAY CROSSING ACCIDENTS. (861)

REPORT. Amer. Railway Assoc. Safety Sec. Proc. 14: 120-137. 1934.

Similar report is issued annually.

AMERICAN RAILWAY ENGINEERING ASSOCIATION, COMMITTEE IX-HIGHWAYS.

(862)REPORT. Amer. Railway Engin. Assoc. Bull. 29 (303), pt. 1: 675-706, illus., 1928; 31 (320): 473–488, illus, 1929; 32 (329): 65–94, illus, 1930; 33_(337): 64–78, illus, 1931; 33 (343): 497–508, illus, 1932; 34 (354): 647-679, illus., 1933; 35 (361): 561-577, 1933; 36 (367-368); 55-59, 1934; 36 (374): 877-908, illus., 1935; 37 (378): 47-56, illus., 1935; 37 (384): 577-592, illus., 1936; 38 (391): 255-292, illus., 1936,

From 1928 to 1934 the committee is listed as Committee IX-Grade Crossings.

Table, by States, gives laws, regulations, and practices governing dimensions and clearances affecting construction, protection, elimination and separation of grades of highway-grade crossings, and digest by States of laws and practices for determining division of cost of highway grade crossing separations, 34 (354); comparative merits of various types of grade crossing protection, 37 (384); revision of manual, design and specifications for highway crossings at grade over railway tracks, both steam and electric, 38 (391).

AMERICAN ROAD BUILDERS' ASSOCIATION, COMMITTEE ON GRADE CROSSINGS. (863)REPORTS. Amer. Road Builders' Assoc. Proc. 26: 500-511, illus., 1929; 27: 251-264, illus., 1930; 28: 219-227, illus., 1931. The 1930 report is also in Highway Engin. and Contractor 36 (3): 59-64, illus., 1930, under title "Various Types of Useful Railroad Crossings."

The 1929 report suggests method of selecting grade crossings for elimination, while the 1931 report discusses New York procedure as an example of grade-crossing elimination.

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ANONYM

RATI. TTZ AMERICAN ROAD BUILDERS ASSOCIATION, COMMITTEE ON RAILWAY GRADE CROSS-INGS AND HIGHWAY INTERSECTIONS. (864)

REPORT. Amer. Road Builders' Assoc. Proc. 28: 251-261, illus. 1931.

Discussions by L. G. Holleran, O. J. Eidemann, and E. E. Brandow, pp. 257-261.

Accidents at railroad crossings; increasing grade crossings; relocation; existing railroad crossings: traffic control at intersections: motor-vehicle accidents; economic losses caused by motor-vehicle accidents.

ANDERSON, B. T.

(865)

SURVEY OF RAILROAD HIGHWAY GRADE CROSSING ACCIDENT STATISTICS. 17 DD., illus. New York, published by the author. 1936. ([Bur. Railway Signaling Econ.] Bull. 11.)

Survey analyzes accident statistics in order to determine relative efficiency of several types of devices used for highway grade-crossing protection.

ASSOCIATION OF AMERICAN RAILROADS, JOINT COMMITTEE ON GRADE CROSSING PROTECTION. (866)

STANDARDS AND RECOMMENDED PRACTICE FOR RAILROAD HIGHWAY GRADE CROSSING PROTECTION. Assoc. Amer. Railroads, Joint Com. Grade Crossing Protect. Bull. 2, 21 pp., illus. Washington, D. C. 1935.

-. OPERATIONS AND MAINTENANCE DEPARTMENT, COMD. (867)

SUMMARY OF STATE LAWS AND REGULATIONS REGARDING BUSES AND TRUCKS. Amer. Railway Engin. Assoc. Bull. 38 (387): 57-68. 1936.

"This information in full has been compiled and issued by the Association of American Railroads, Operations and Maintenance Department." p. 57.

Includes a summary of regulations of hours of service of motor-vehicle operators of trucks and busses; tables showing number of grade crossings and accidents according to type of protection; comparative cost of grade-crossing protection for one, two, and four tracks, 24 hours per day; advantages and disadvantages of different types of grade-crossing protection; and State regulations of motor vehicles.

-, SIGNAL SECTION, COMMITTEE VIII-HIGHWAY CROSSING PROTECTION.

(868)[REPORT.] Assoc. Amer. Railroads, Signal Sec. Proc. (1935) 33: 304-308. 1936.

Train approach signals, 1936: development on highway-crossing protection: Federal and State activities.

BARTON, G. W.

(869)HIGHWAY GRADE CROSSINGS-THEIR ELIMINATION AND PROTECTION: AS THE MOTORIST SEES IT. Jour. West. Soc. Engin. 40: 116-121. 1935. Abstract in Railway Age 98: 740-742. 1935.

Presented before the Western Society of Engineers, Chicago, March 25, 1935.

BLACKHALL, J. R.

RAILWAY CROSSINGS NEED POSITIVE PROTECTION. Natl. Safety News 28 (6): 9-10, 52-54, illus. 1933.

Paper presented before the Electric Railway Section, 22d annual safety congress.

"For the maximum of safety at highway-railway crossings too much dependence should not be placed upon devices which merely warn the motorists."

BOWEN, L. R.

(871)

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GRADE SEPARATION PROJECT IN ST. LOUIS : TRACKS OF WABASH AND ROCK ISLAND BAILROADS RELOCATED AND DEPRESSED THROUGH FOREST PARK. Civ. Engin. 3: 623-625, iilus. 1933.

Marked economies are secured by changing alinement of the railroad and by forming "screening embankments" along its sides parallel to the tracks, BRENNAN, J. G.

CROSSING ELIMINATION: THE FEDERAL GOVERNMENT'S HIGHWAY-RAILWAY GRADE CROSSING ELIMINATION PROGRAM SUMMARIZED, PROGRESS REPORTED, AND NEEDS ANALYZED—COOPERATION BETWEEN THE BUREAU OF PUBLIC ROADS, THE HIGH-WAY DEPARTMENTS, AND RAILROADS RESULTS IN AN EFFICIENT PLAN OF OPER-ATION. Engin. News-Rec. 118: 200-204, illus. 1937.

BROOKS. R. B.

GRADE CROSSINGS. Amer. Road Builders' Assoc. Proc. 33: 553-564, illus. 1936. Abstract in Concrete 44 (4): 5-6. 1936.

Eliminations during past 10 years; Federal funds available; economic losses; Missouri survey; methods of evaluation; accident trend; opinions.

BUDDENBERG, A.

DIE SICHERUNG DER BAHNÜBERGÄNGE DURCH WEGÜBERGANGSBAKEN. Verkehrstechnik 16: 661-665, illus. 1935.

Safety of grade crossings through road-crossing-warning signs.

CALIFORNIA RAILROAD COMMISSION.

REPORT OF THE GRADE CROSSING SITUATION OF PUBLIC STREETS, ROADS AND HIGH-WAYS WITH STEAM AND ELECTRIC INTERURBAN BALLROADS IN THE STATE OF CALIFORNIA, PURSUANT TO ASSEMBLY CONCURRENT RESOLUTION NO. 23, CHAPTER 45, LAWS OF 1931. December 1, 1932. 113 p. [Sacramento, Calif. State Print. Off. 1933.]

—, ENGINEERING DEPARTMENT, TRANSPORTATION DIVISION. (876) ANNUAL REPORT OF GRADE CROSSING ACCIDENTS YEAR 1929. 37 pp. San Francisco. 1930. [Mimeographed.]

CARROW, T. H.

RAILROAD-HIGHWAY CROSSING ACCIDENTS AND MEANS OF THEIR PREVENTION. Nation's Traffic 2 (7): 28-29, illus. 1928.

"Disregard of simple precautions is responsible for 2,500 fatalities and 7,000 injuries annually at railroad crossings in United States."

Only remedy for highway-crossing accidents is to teach the 30 or 40 million drivers in the country to drive safely, and to back **up** this teaching with suitable laws and enforcement.

DILLMAN, G. C.

THE RAILWAY CROSSING PROBLEM. Mich. Univ. Conf. Highway Engin. Proc. 16: 155-163. 1930. Also in Mich. Roads and Airports 27 (11): 3-5. 1930. Elimination program and campaign to make crossings at grade as safe as possible.

DOHONEY, J. P.

GRADE CROSSING ACCIDENTS AND WHAT THE STATE IS DOING TO MINIMIZE THEM. Pa. Safety Cong. Proc. 1928: 225-226. 1928. (Pa. Dept. Labor and Indus. Spec. Bull. 19.)

DROEGE, J. A.

STOP, LOOK, AND LISTEN. Conn. Indus. 7 (2): 5-11, 27, illus. 1929.

Responsibility of the individual; increase of crossings at grade; percentage of protected grade crossings; requirements of drivers; the engineer vs. the automobile driver; cost of elimination.

FLETCHER, A. B., and ELIOT, W. G., 3d

STATISTICAL ANALYSIS OF HIGHWAY-RAILROAD GRADE-CROSSING ACCIDENTS IN 1926. Pub. Roads 8: 231-242, illus. 1928.

Rural and urban accidents compared; grade crossing responsible for 16 percent of rural highway fatalities; grade crossings protected by various devices; majority of accidents occur at unprotected crossings; number of accidents not measure of efficiency of protection; speed of trains; train vs. automobile.

FORD, R. H.

RAILROAD CROSSING PROTECTION. Mich. Univ. Conf. Highway Engin. Proc. 15: 153-172. 1929.

Discussion, pp. 165-172.

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FORD, R. H.

RAILBOAD CROSSING PROTECTION-continued.

A summarized comparison of the various protected crossings in the United States, with the form of protection as reported by the Interstate Commerce Commission, p. 161.

The author discusses E. W. James' proposal for classification.

(883)

SEPARATION OF WAYS. 12 pp. [New York, Amer. Soc. Civil Engin.] 1935. [Mimeographed.] Also in Civil Engin. 5: 151–154, illus. 1935. Abstract in Railway Age 98: 643–645, illus., 1935, under title "The Highway Grade Crossing—A National Problem."

Paper delivered before the eighty-second annual meeting of the American Society of Civil Engineers, New York City, January 16, 1935.

There are at least 30,000 railroad grade crossings which should be eliminated. As the resulting benefits of elimination largely accrue to the general public, the burden of cost should be borne by the public, with Government subsidy to cover cost.

FRY, E. M.

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OKLAHOMA CITY'S GROWTH DEMANDS EXTENSIVE RAILROAD CHANGES: RIGHT-OF-WAY OF ONE RAILROAD IN CENTRAL DISTRICT SOLD TO CITY FOR A PARK AND CIVIC CENTER, AND A NEW LINE BUILT ON ANOTHER LOCATION-GRADES SEPA-RATED ON OTHER RAILROADS AND TERMINALS RECONSTRUCTED. Engin. News-Rec. 108: 432-433, illus. 1932.

HILL, C. E.

RAILROADS AND SAFETY. Safety Engin. 61: 335-336. 1931. Includes number and causes of grade-crossing accidents.

HOLLERAN, L. G.

PROBLEMS IN THE SEPARATION OF HIGHWAY GRADE CROSSINGS. Assoc. Highway Off. North Atlantic States Proc. 4: 129–150, illus. 1928. Abstract in Amer. City 38 (3): 75–77, illus., 1928; Good Roads 71: 246–247, 1928; Nation's Traffic 3 (2): 46–47, 1929.

Particular examples are given of highway grade separation in Westchester County, N. Y. Discussion by Fred Lavis, pp. 139–140, brings out practice in New Jersey, and discussion by W. A. Van Duzer, pp. 141–150, brings out practice in Pennsylvania.

HOWARD, H. D.

AUTOMOBILE ACCIDENTS AT RAILROAD CROSSINGS. Amer. Road Builders' Assoc. Proc. 25: 125-132, illus. 1928. Abstract in Amer. City 7 (1): 11-12. 1928.

Physical and mental qualifications for drivers; Sunday the engineer's day of dread; careless and reckless motorist; the grade-crossing accident; the remedy.

HUNTER, J. G.

GRADE CROSSING PROTECTION AND CLASSIFICATION. 7 pp. [1933.] [Mimeographed.]

A paper presented at the eleventh annual conference of State utility commission engineers, held at the Bureau of Standards, Washington, D. C., June 1933.

Traffic; physical conditions; accident record over a period of years; type of protection; classification of crossings; traffic regulations and enforcement.

JAMES, E. W.

(889)

INDICATED NEEDS OF GRADE CROSSING ELIMINATION. Amer. Road Builders' Assoc. Proc. 32: 55-62, illus. 1935. Abstract in Pacific Road Builder and Engin. Rev. 42 (2): 24, 1935; Natl. Safety News 31 (5): 15-16, 51, 1935, under title "When is Grade Separation Justified."

Present status; establishment of an order of precedence; time-loss study important; classification and selection.

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KUELLING, H. J.

GRADE CROSSING ACCIDENTS IN WISCONSIN. Roads and Streets 68: 340. 1928. Taken from the fourth quarterly report for 1927 of H. J. Kuelling, State highway engineer of Wisconsin.

LAWTON, E. C.

RAILEOADS AND HIGHWAY CROSSINGS. Amer. Highways 15 (1): 29-33, 1936. First and most important reason for eliminating highway and railroad grade crossings is to save human life. Any design, irrespective of cost, is improper if it fails to provide adequate sight distance, reasonable grade and curves, and adequate widths of structure. The author discusses experience of the State of New York.

LEAGUE OF NATIONS, ORGANIZATION FOR COMMUNICATIONS AND TRANSIT. (892) SIGNALS AT LEVEL CROSSINGS: REPORT OF THE SPECIAL COMMITTEE. Adopted by the Advisory and Technical Committee for Communications and Transit, nineteenth session, November 1935. 4 pp. Geneva, Switzerland. 1935. (Ser. League of Nations Pub. 8. Transit. 1936. VIII. 5.)

"In the interval, extensive documentary material was collected on the basis of a questionnaire (C. L. 21. 1934. VIII) sent out by the Secretary-General of the League of Nations to the Governments of European States and to those of the United States of America and Canada. Replies from 30 States have been received and analyzed by the Secretariat of the Special Committee."

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PROCEDURE IN ACQUIRING SIGNALS AT RAILROAD CROSSINGS. Mich. Univ. Conf. Highway Engin. Proc. 18: 141-147. 1932.

Michigan Public Utilities Commission administers laws pertaining to crossing protection.

MELICK, C. A.

HIGHWAY SIGNS AND SIGNALS AT RAILROAD CROSSINGS. Mich. Univ. Conf. Highway Engin. Proc. 18: 148-170. 1932.

Discussion, pp. 163–170, entitled "Arrangements for Installing New Railroad Crossing Signals During 1932."

Signs and signals classified in accordance with the purpose which they serve; lists the objections to the use of gates; the new "crossing act" in Michigan.

MORROW, F. E.

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HIGHWAY GRADE CROSSINGS—THEIR ELIMINATION AND PROTECTION: A RAILROAD VIEWPOINT. JOUR. West. Soc. Engin. 40: 113-116. 1935. Abstract in Railway Age 98: 739-740. 1935.

Presented before the Society of Western Engineers, Chicago, March 25. 1935.

NATIONAL ASSOCIATION OF RAILROAD AND UTILITIES COMMISSIONERS, COMMITTEE ON RAILROAD GRADE CROSSINGS, ELIMINATION AND PROTECTION. (896)

REPORT. Published annually. Natl. Assoc. Railroad and Utilities Commrs. Proc.

The 1930 report gives exhaustive and detailed information and statistics pertaining to grade-crossing accidents, the progress of eliminations, and the different methods adopted for the protection of highway travel at railroad-highway grade crossings; the 1934 report has a tabulation of State replies to a questionnaire covering protection and elimination, including information as to percentage of cost borne by State, pp. 490–493.

New York STATE LIBRARY, LEGISLATIVE REFERENCE SECTION. (897) DIGEST OF THE LAWS OF THE VARIOUS STATES RELATING TO GUARDING AND PRO-TECTING RAILROAD GRADE CROSSINGS. Prepared by June Lambert. 17 pp. New York, 1930.

NEW YORK STATE PUBLIC SERVICE COMMISSION.

GRADE CROSSINGS AND ACCIDENTS. N. Y. Pub. Serv. Comn. Ann. Rept. 1935 (v. 1): 57-66. 1936.

Similar information appears in the report annually.

Progress in grade-crossing elimination; decrease in accidents, deaths, and injuries; highway-grade-crossing accidents on steam railroads; accidents on electric railroads; safety of motorbus operations.

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MCCLURE, H. C.

PETERS, R. H.

STOP. LOOK, AND LISTEN. Forum 92: 239-243, illus, 1934.

Coupled with a program of closures must go a program of protecting remaining crossings, either through signals or gates, or through overpasses or underpasses.

PEW, M. E.

WHY DO THEY DO IT?: AN EDITOR REFLECTS ON THE UNACCOUNTABLE BEHAVIOR OF SOME MOTORISTS AT HIGHWAY GRADE CROSSINGS. Natl. Safety News 18 (4): 64, 124, illus. 1928.

RICE, P. X.

PROTECTION OF RAILWAY GRADE CROSSINGS. Inst. Traffic Engin. Proc. 5: 41-72, illus. 1934. [Processed.]

Bibliography, p. 55.

Discussion, pp. 56-72.

Illustrations show recommended signs and pavement marking, electric gate wiring diagrams, automatic gate for single track, traffic signals, reflector lens signs, scheme for flashing lights, etc. Charts and formulas show capital justified at highway and railroad crossings, also for highway and street elimination.

ROWE, H. A.

GRADE CROSSING A UTILITY PROGRAM. All Ohio Safety Cong. Proc. 6: 290-296, 1935.

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THE CROSSING CRASH. Natl. Safety News 17 (5): 9-10, 68, illus. 1928. Reduced casualties in 1927; preventive factors; advertising the crossing's presence; public-cost participation; Supreme Court's decision (Goodman case).

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LET'S WAIT! THE RAILROAD CROSSING CASUALTY IS ONE OF THE TRAGEDIES OF MODERN MOTION MANIA. Natl. Safety News 19 (5): 9-10, 78, illus. 1929.

RUDD, A. H.

THE RAILROAD'S SIDE OF GRADE CROSSING ACCIDENTS. Pa. Safety Cong. Proc. 1928: 226-238. 1928. (Pa. Dept. Labor and Indus. Spec. Bull. 19.)

Statistics show number of grade crossings eliminated in the State of Pennsylvania, statistics on accidents are given, and various signals used are described.

RUDD, E. I.

GRADE CROSSING CLASSIFICATION AND PROTECTION. 11 pp. [1933.] [Mimeographed.]

A paper presented at the eleventh annual conference of State utility Commission engineers, held at the Bureau of Standards, Washington, D. C., June 1933.

SCHERMERHORN, H. O.

BRIDGE AND GRADE CROSSING PROBLEMS. Assoc. Highway Off. North Atlantic States Proc. 4: 100-115. 1928.

Discussion by John W. Childs, pp. 114–115, brings out practice in New Hampshire. Elimination of grade crossings in New York State is described.

RAILROAD AND HIGHWAY GRADE SEPARATIONS. 22 pp. 1935. [Mimeographed.] Also in Low Bidder 9 (5): 6-10. 1935.

Paper read at the convention of the Associated General Contractors, Washington, D. C., January 29, 1935.

Review of the experiences in New York State of highway-railroad gradecrossing elimination.

STEINBERGER, M. F.

CURBING CROSSING ACCIDENTS. Railway Age 99: 49-50. 1935.

Abstract presented before the American Association of Railroad Superintendents, Chicago, June 18-20. 1935.

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STONE, G. A.

HIGHWAY-RAILWAY GRADE SEPARATION. Canad. Good Roads Assoc. Proc. 22: 22-33. 1936. Also in Canad. Engin. 71 (24): 9-12, (25): 8-9. 1936, under title "Financing Highway-Railway Grade Separation." Discussion, pp. 27-33.

Takes up the following: Railway grade crossing fund, section 262 of the Railway Act; nonobservance of approaching trains, signs, and automatic signals; results of accidents at highway-railway crossings; standardization of signs and automatic signals.

TRATMAN, E. R.

- GRADE SEPARATION IN LARGE CITIES: A REVIEW OF THE PROBLEMS OF COMPLICATED INTERRELATIONS OF BAILWAYS, CITIES, PUBLIC UTILITIES, AND PRIVATE INTER-ESTS; OF TRACK ELEVATION VERSUS DEPRESSION; OF COST DISTRIBUTION AND TYPES OF STRUCTURES IN GENERAL USE. Engin. News-Rec. 106: 360-364. illus. 1931.
- UNITED STATES DEPARTMENT OF AGRICULTURE, BUREAU OF PUBLIC ROADS. (912) A COMPILATION OF THE LAWS OF THE FORTY-EIGHT STATES RELATING TO THE PROTECTION OF THE PUBLIC AT POINTS WHERE RAILROADS INTERSECT HIGHWAYS AT GRADE, INCLUDING GRADE CROSSING ELIMINATION ACTS. COmpiled by Robert D. Lyons. 391 pp. Washington, D. C., U. S. Bur. of Pub. Roads 1931. [Mimeographed.] Sup. 1933, 72 pp. [Mimeographed.]

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- RULES AND REGULATIONS FOR CARRYING OUT THE PROVISIONS OF THE EMERGENCY RELIEF APPROPRIATION ACT OF 1935 (PUB. RES. NO. 11-74TH CONG.) WHICH RELATE TO THE ELIMINATION OF HAZARDS TO LIFE AT RAILROAD GRADE CROSSINGS, IN ACCORDANCE WITH THE PROVISIONS OF THE FEDERAL HIGHWAY ACT. [Approved by the Secretary of Agriculture and by the Works Progress Administrator July 8, 1935, and by the President of the United States July 12, 1935, as amended August 29, 1935, and September 12, 1935.] 10 pp. Washington, U. S. Govt. Print. Off. 1935.
- UNITED STATES INTERSTATE COMMERCE COMMISSION, BUREAU OF SAFETY. (914) REPORT OF THE DIRECTOR . . . FOR THE FISCAL YEAR ENDED JUNE 30, 1935, AND EXTRACTS FROM THE FORTY-NINTH ANNUAL REPORT OF THE INTERSTATE COM-MERCE COMMISSION PERTAINING TO SAFETY APPLIANCES, HOURS OF SERVICE, AUTOMATIC TRAIN CONTROL, INVESTIGATION OF ACCIDENTS, MEDALS OF HONOR, AND INVESTIGATION OF SAFETY DEVICES. 51 pp. Washington, U. S. Govt. Print, Off. 1935.

Grade crossings-railway with highway, pp. 47-49.

-, BUREAU OF STATISTICS.

HIGHWAY GRADE CROSSING ACCIDENTS CAUSED BY MOTOR VEHICLES RUNNING INTO THE SIDE OF TRAINS—CALENDAR YEAR 1934. 8 pp. Washington, D. C. [1935?] [Mimeographed.]

-----, BUREAU OF STATISTICS.

HIGHWAY GRADE-CROSSING ACCIDENTS INVOLVING COLLISIONS BETWEEN MOTOR VEHICLES AND TRAINS, YEAR ENDED DECEMBER 31, 1936. 16 pp. Washington, D. C. 1937. [Mimeographed.] (Statement 3714, File No. 4-B-1.) Similar information is published annually.

VOGEL, J. L., and WILSEY, G. H.

GRADE SEPARATIONS FOR RAILROADS: SOME RECENT DESIGNS TO CUT COSTS AND METHODS TO FACILITATE CONSTRUCTION. Civ. Engin. 3: 140-144, illus. 1933. Structural design of economic types, by J. L. Vogel. pp. 140-142, discusses relative costs and advantages of various structural designs.

Construction under heavy traffic, by G. H. Wilsey, pp. 143–144, points out numerous difficulties that confront contractor in construction of railroad grade separations under heavy traffic and in cramped quarters.

SAFETY AND ECONOMIC FEATURES OF VARIOUS TYPES OF RAILROAD CROSSINGS. Mich. Univ. Conf. Highway Engin. Proc. 19: 199-209. 1933. Also in Mich. Roads and Airports 30 (10): 34-35. 1933.

Discussion, pp. 205–209, includes a short article entitled "Check Proves Motorists Reckless at Crossings" from the New York Central Lines Magazine for August 1932.

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WAGNER, G. J.

SAFETY ZONES

ANONYMOUS. (919)BIRMINGHAM LEADS THE WAY IN GYRATORY TRAFFIC ISLANDS. Good Boads [Brit.] 9: 111. illus. 1933. (920)CAMBRIDGE, MASS. DEATH TRAP: A SUGGESTED SOLUTION OF THE UNFORTUNATE MASSACHUSETTS AVENUE STATION. Automobilist 18 (1) : 8-9, illus. 1934 The 31 "safety islands" in a distance of 1.9 miles impede traffic and cause accidents. Recommends removal of islands, placing of street-car tracks next to curbs, and prohibiting of parking. (921)CROSSING PLACES FOR PEDESTRIANS: EXPERIMENTS WITH COLOURED CONCRETE. Surveyor and Munic, and County Engin, 84: 607, illus, 1933. (922)LE ISOLE SALVAGENTE, Le Strade 16: 463-466, illus, 1934. The safety island is discussed. (923)MARKERS INCREASE VISIBILITY OF SAFETY ZONES. Natl. Safety News 21 (2): 27. illus. 1930. As a starter in an accident-reduction campaign, the traffic survey bureau of the Detroit Police Department has recommended expenditure of \$41,455 for markers. (924)NEW SAFETY ZONES PROTECT PEDESTRIANS AND TROLLEY PASSENGERS IN TORONTO : ELECTRIC BEACONS OF UNUSUAL DESIGN INSTALLED. Munic. News and Water Works 76: 191-192, illus. 1929. (925)189 ACCIDENTS IN ONE YEAR: STREET ISLANDS BLAMED. Good Roads [Brit.] 9: 228. 1933. A special subcommittee of the streets, sewers, and buildings committee of Corporation of Glasgow was appointed to consider and report upon accidents in Great Western Road. (926)THE PERIL OF STREET REFUGES. [By Assoc. M. Inst. C. E.] Surveyor and Munic. and County Engin. 51: 471-474. 1932. Discussion, pp. 471-472. Comments favorably on eccentric position of traffic-dividing refuge at street intersection or turning. Vehicle turning to left requires less space than one turning to right. (927)PREVENTING STREET LOADING ISLANDS FROM BECOMING TRAFFIC HAZARDS. Amer. City 48 (7): 73, illus. 1933. Dirty islands constitute a real menace to traffic; hot-water vapor mechanically applied solves the problem; good results of this system in Cincinnati are pointed out. (928)SAFETY MEASURES FOR PEDESTRIANS: THE "CHECKON" CROSSING. Surveyor and Munic. and County Engin. 84: 147, illus. 1933. Design of payement; provisions for pedestrians; weather effects. (929)1936. On safety SALVAGENTE A SCOMPARSA. Le Strade 18: 464-465, illus. platforms. (930)TRAFFIC ISLANDS PROGRESS IN BOMBAY. Safety Engin. 71: 67-68, illus. 1936. "With the introduction of traffic islands, the vehicular traffic has to pass round the island and though vehicles have to be slowed down, a more or less continuous stream of traffic is maintained. (931)

VERSENKBARE VERKEHRSINSELN. Verkehrstechnik 16: 666-667, illus. 1935. On sinkable traffic islands. AMERICAN ROAD BUILDERS' ASSOCIATION, DIVISION OF CITY OFFICIALS, COMMITTEE ON TRAFFIC. (932)

MODERN PRACTICE IN SAFETY ZONE DESIGN AND USE. Amer. Road Builders' Assoc. Proc. 29 (Bull. 32): 50-77, illus. 1932.

Includes comparative information.

DETROIT INSTALLS NEW TYPE OF SAFETY ZONE. Engin. News-Rec. 110: 433. 1933.

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Its approach is similar to prow of boat and, it is claimed, it will divert any automobile from zone's occupants. Platforms are of precast reinforcedconcrete slabs.

ILGNER, H. F.

WHAT IS A SAFETY ZONE-BASED ON EXPERIENCE IN MILWAUKEE. Inst. Traffic Engin, Proc. 7: 34-38, illus, 1936.

Safety zones fulfill a real need. Painted safety zones, raised safety islands, streamlining the approach, maintenance of safety zone lights, and results with the Milwaukee type zone are some of the topics discussed.

MASSACHUSETTS GOVERNOR'S COMMITTEE ON STREET AND HIGHWAY SAFETY. (935)TRAFFIC SAFETY SURVEY, CAMBRIDGE, MASSACHUSETTS. 133 pp., illus, [Boston. Mass.] 1934. [Mimeographed.]

Special Study no. 1, Traffic Conditions on Massachusetts Avenue from Waterhouse Street to the Arlington Line, pp. 81-100, includes intersection studies, safety islands, stop signs, speed, stopping distances, and street markings.

MICKLE, D. G.

SAFETY ISLANDS-THEIR DESIGN AND USE: TO PREVENT ACCIDENTS AND FACILI-TATE THE MOVEMENT OF PEDESTRIAN AND VEHICULAR TRAFFIC. Civ. Engin. 2: 435-439, illus. 1932.

Reviews many types of safety islands and describes various kinds of obstructions erected to protect pedestrians using them. Points out that although safety of pedestrians is paramount, motorists must also be provided with all possible safeguards against collision with any obstructions placed in roadway.

SCHMEDDING, JAN.

EVOLUTION OF STREET-CAR SAFETY ZONES IN DETROIT. Amer. City 44 (5): 141-. 142, illus. 1931.

WHAT IS A SAFETY ZONE-BASED ON EXPERIENCE IN KANSAS CITY. Inst. Traffic Engin. Proc. 7: 30-33, illus. 1936.

This address was also delivered before the Street and Highway Traffic Section, 25th National Safety Congress, Atlantic City, October 1936. Also in Pub. Safety 11 (4): 12-14, illus., 1936.

Protection of pedestrians; protection of occupants of vehicles; important features of design; aids to visibility.

PROTECTIVE SAFETY ZONES. Inst. Traffic Engin. Proc. 3: 21-33, illus. 1932. [Mimeographed.]

Discussion, pp. 31-33.

Design of safety zone; construction of zones; visibility; results of test zones; other uses of protective features.

SIMPSON, H. S.

MODERN PRACTICE IN DESIGN AND USE OF SAFETY ZONES. 23 pp., illus. n. p. [1932.]

Reprinted from AERA issue of December 1931, January and February 1932.

Analyzes replies to data sheets on safety zones as to extent of their use, as well as types of construction and lighting, gives regulation of motor vehicle operation at safety zones, and new ideas in design and lighting.

GARDNER, A. P.

SEBURN, T. J.

SIMPSON, H. S.

SAFETY ZONES. Natl. Research Council, Div. Engin. and Indus. Research, Highway Research Bd. Proc. (1935) 15: 276-287. [1936.]

The paper describes a number of both good and bad installations that have been used in American cities. Unless properly built and adequately lighted they constitute a real traffic hazard.

SORENSON, L. J.

SAFETY ZONE ABUTMENTS. (Abstract.) Inst. Traffic Engin. Proc. 4: 103-104. 1933. [Mimeographed.]

Bulkheads, brakes, lights and lighting, and measurement of approach area are taken up.

HIGHWAY LIGHTING

Item numbers 943-1005 on highway lighting withdrawn from publication. See

WILSON, M. A., comp.

BIBLIOGRAPHY ON HIGHWAY LIGHTING. U. S. Dept. Agr. Misc. Pub. 279, 30 pp. Washington, U. S. Govt. Print. Off. 1937.

SIDEWALKS

ANONYMOUS.

THE CONSTRUCTION OF PEDESTRIAN PATHS ALONG THE HIGHWAYS. Recreation 28: 149, illus. 1934.

Gives provisions in several of the States, namely New York, Pennsylvania, and Wisconsin.

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FOOTWAYS ON COUNTRY ROADS: NEED FOR WIDESPREAD IMPROVEMENT: DEFECTS OF CONSTRUCTION AND MAINTENANCE: SOME SUGGESTIONS. By "Foot-passenger." Surveyor and Munic. and County Engin. 84: 243. 1933.

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KERBSIDE HEDGES: A SURREY ROAD SCHEME. Surveyor and Munic. and County Engin. 87: 484. 1935.

Hedges are to be used to form barrier between footpath and carriageway. Until hedges are fully grown, wire mesh fence is to be provided.

(1009) REFORM IN SIDEWALK LEGISLATION. Highway Builder 14 (6): 21. 1935. Quotes laws of various States.

SIDEWALKS ALONG STATE HIGHWAYS. Travelers Standard 24 (1): 15-18, illus. 1936.

Massachusetts has already started building 1,000 miles of sidewalks along its highways.

SIDEWALKS FOR STATE ROADS IN MASSACHUSETTS. Engin. News-Rec. 115: 610-611, illus. 1935.

Includes design cuts and form for district engineer's report of sidewalkproject volume, equipment, and cost estimate.

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65-MILE CREOSOTED FENCE ENCLOSES MODERN ENGLISH HIGHWAY. Wood Preserving News 12: 158-160, 169-170, illus. 1934.

Liverpool-East Lancashire road, between Liverpool and Manchester, England, has fence and 6-foot walkway on each side of road. Provision is made for subsidiary roadway to be built on each side if needed.

REPORT. Amer. Soc. Munic. Engin. Proc. (1930) 36: 241–245, 1931; (1931) 37: 504–514, illus., 1932; (1932) 38: 512–529, 1933; (1933) 39; 261–263, 1934; (1934) 40: 92, 1935.

The fortieth annual proceedings is published in the Public Works Engineers' Yearbook, 1935.

Tabulation of State laws given in v. 36, p. 245. New York, New Jersey, and Massachusetts passed enabling acts as to State highway sidewalks, v. 37, p. 505; Practice, laws, importance, accidents, statistics, v. 38, pp. 512– 520; Draft law for universal State legislation suggested, v. 39, pp. 261–263. 26777°-38-7

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AMERICAN SOCIETY OF MUNICIPAL ENGINEERS, COMMITTEE ON HIGHWAY SIDE-WALKS. (1013)

ENO. W. P., and TILDEN, C. J. (1014)SIDEWALKS. Eno Foundation for Highway Traffic Regulation, Inc., Bull. 1, [3] pp. [Saugatuck, Conn. 1935.] Requirements of pedestrians should be provided for in plans for new roads. (1015)MCCANN. J. T. A. INCREASING SAFETY ON THE HIGHWAYS BY BUILDING SIDEWALKS. Amer. City 50 (11); 49-50, illus, 1935. Author discusses methods of construction of sidewalks in White Plains. N. Y., suitable surfaces, curbs, side forms, and labor organization. MCGUIRE, J. R. (1016)FOOTPATHS PROTECT PEDESTRIANS: BITUMINOUS WALKS BUILT ALONG RURAL HIGHWAYS IN MILWAUKEE COUNTY, WIS. Better Roads 4 (11): 11-12. illus. 1934. Editorial, p. 8. (1017)MARTIN. G. E. TAR SIDEWALKS FOR SAFER HIGHWAYS. Pub. Works 67 (1): 10-11, illus. 1936. MOORE, C. S. (1018)SIDEWALK TRAFFIC CONDITIONS AND OBSTACLES SHOWN BY STUDY: PEDESTRIAN SPEED RESTRICTED IF DENSITY EXCEEDS 300 PER FOOT WIDTH PER HOUR-OPEN ELEVATOR WORST OBSTRUCTION. Engin. News-Rec. 103: 297-299. illus. 1929. Editorial, p. 280. Data on sidewalk-traffic conditions were gathered in various California cities as a part of material for a thesis at the University of California. NORTHROP, P. C. (1019)SCHOOL PATHS AND HIGHWAY SAFETY: SUGGESTION FOR UNEMPLOYMENT RELIEF PROJECTS WHICH CAN MEAN THE SAVING OF LIVES. Highway Mag. 25: 19-20, illus. 1934. Relief unemployment project in Multhomah County, Oreg. OWENS, STANLEY. (1020)GIVING THE RURAL PEDESTRIAN A BREAK. Natl. Safety News 26 (3): 23. 1932. Recommends highway sidewalks. SMITH. E. K. (1021)MOVEMENT GAINS STRENGTH FOR HIGHWAY SIDEWALKS. Pub. Safety 5 (8): 11-12, illus, 1931. Rural deaths increasing; bill passes in New York. (1022)TRAFFIC SAFETY SUGGESTION-HIGHWAY SIDEWALKS. Pub. Safety 4 (7): 13-14, illus. 1930. Describes movement to protect the pedestrian on rural roads. WARREN, G. C. (1023)HIGHWAY SIDEWALKS. Amer. Soc. Munic. Engin. Proc. 36: 241-246. 1931. Establishment of sidewalks on rural roads is an important means of accident prevention. TRAFFIC CONTROL AND REGULATION GENERAL DISCUSSION

ANONYMOUS.

(1024)

REGULATING TRAFFIC ON THE HIGHWAYS. Automobile Topics 121: 267, 270, 306-308, 351-352, 385, 390, 425, 434, 465-466. 1936.

This article includes: (1) The legislative power; (2) speed laws and governors; (3) licensing owners and drivers; (4) concerning the right to drive; (5) controlling accident hazards; and (6) compulsory maintenance needed.

AMERICAN AUTOMOBILE ASSOCIATION.

DIGEST OF MOTOR LAWS: SUMMARY OF REGULATIONS GOVERNING REGISTRATION AND OPERATION OF PASSENGER CARS IN THE FORTY-EIGHT STATES. THE DISTRICT OF COLUMBIA AND THE PROVINCES OF CANADA, 1936-1937. 61 pp. Washington, D. C. c1936.

Published annually by the association.

AMERICAN ROAD BUILDERS' ASSOCIATION, DIVISION OF CITY OFFICIALS. COMMITTEE (1026 - 1027)ON TRAFFIC.

Amer. Road Builders' Assoc. Proc. 26: 327-339, illus. 1929: 33: REPORTS. 565-589, illus., 1936.

Discussion, by A. B. Barber, Proc. 26, pp. 335-339, "Hoover Code" and establishment of engineering traffic departments are recommended in Proceedings 26.

In Proceedings 33, the following topics are included: traffic law enforcement; drivers' license; regulation of pedestrian traffic; safety education; building safety and facility into the highway; terminal facilities; traffic signals and signs; design and use of safety zones; traffic accident statistics: mass transportation systems; elevated highways.

AMERICAN TRANSIT ASSOCIATION, COMMITTEE ON STREET TRAFFIC. REPORT. Abstract in Amer. Transit Assoc. Proc. 54: 1003-1015. 1935. (1028)

Discussion, pp. 1007-1015.

Traffic-control signals; design and use of safety zones; intersections; bus exit doors; garage, parking lot, and service station entrances and exits.

AUTOMOBILE CLUB OF SOUTHERN CALIFORNIA. LICENSE DEPARTMENT. (1029)SUMMARY OF MOTOR VEHICLE ACTS, 1935-1936: UNITED STATES, ALASKA, HAWAH, PANAMA CANAL ZONE AND CANADIAN PROVINCES. 146 pp. [Los Angeles.] c1936.

BARBER, A. B.

THE HIGHWAY INDUSTRY'S RESPONSIBILITY FOR TRAFFIC SAFETY. Amer. Road Builders' Assoc. Proc. 32: 34-41. 1935.

Factor of safety in traffic; uniform traffic laws needed; revised uniform vehicle code: effectiveness of drivers' license; civil liability and safety responsibility; model ordinances; sign and signal manual.

BICKELL, J. P.

THE NEED FOR UNIFORMITY IN TRAFFIC DIRECTION AND CONTROL; CO-ORDINATION OF URBAN AND RURAL REGULATIONS ESSENTIAL FOR SAFETY AND FACILITY. Canad. Good Roads Assoc. Proc. 20: 16-22. 1933.

Discussion, pp. 21-22.

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REGULATING THE COMMON CARRIER VEHICLE. Canad. Good Roads Assoc. Proc. 21: 117-124. 1934.

Discussion, pp. 122-124.

Outlines some of the more important problems and describes some of the steps taken in Ontario and in other jurisdictions to overcome the difficulties which have arisen. Advocates setting up a standard of physical fitness for drivers, and of mechanical fitness for vehicles, and restricting the issuance of licenses.

BILLINGS, CURTIS. (1033) HOW POLICE DEPARTMENTS CAN GET PUBLIC SUPPORT. Pub. Safety 5: 32-33. 1931.

Police departments can win support by keeping the public informed. Free use of the press, speeches, the radio, and posters are the chief sources of outlet for this information.

(1034)

TRAFFIC CRIMES AND CRIMINALS. Atlantic Monthly 152 (4): 454-461. 1933. Describes methods of investigating accidents that have proved effective in Evanston, Ill.

CHICAGO CITY COUNCIL.

(1035)

REVISED UNIFORM TRAFFIC CODE OF THE CITY OF CHICAGO. JOUR. Proc. City Council, Chicago, Regular meeting, December 9, 1936, pp. 2802-2810.

(1025)

COTTRELL, C. C.

ENGINEERING MUST PRECEDE TRAFFIC REGULATION. Natl. Safety News 21 (3): 38, 40, 72, 1930.

Good judgment with respect to the human element and application of sound engineering principles to the balance of the problem are needed in solving the traffic problem.

ELIOT. W. G., 3d., and LEFFERTS, E. B.

(1037)OBSERVANCE OF TRAFFIC CONTROL, A SERIOUS SAFETY PROBLEM ANALYZED AND ENGINEERING OBJECTIVES DEFINED. Civ. Engin. 5: 528-532, illus. 1935.

Abstracts of papers delivered before the Highway Division, American Society of Civil Engineers, at the Los Angeles convention. Types of Regulation Affect Driving Habits, by William G. Eliot, 3d, analyzes traffic control devices and rules. Accident Studies Show Means of Improvement, by E. B. Lefferts, cites methods used in Los Angeles.

ENO. W. P.

SIMPLIFICATION OF HIGHWAY TRAFFIC. 206 pp., illus. Saugatuck, Conn., Eno Foundation for Highway Traffic Regulation, Inc. 1929.

Discusses the selection and use of traffic guides, systems of regulation. methods of accelerating traffic, and increasing safety.

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SUPPLEMENT TO SIMPLIFICATION OF HIGHWAY TRAFFIC, SETTING FORTH HOW HIGHWAY TRAFFIC REGULATION MAY BE IMPROVED IN TOWN AND COUNTRY. 30 pp., illus. Saugatuck, Conn., Eno Foundation for Highway Traffic Regulation, Inc. c1936.

HALL L. M.

TRAFFIC PROBLEM HINGES ON LAW ENFORCEMENT. Pub. Safety 4 (12): 21-22. 1930.

Police duty is protection; officers must be schooled; penalties should be corrective; favorable public opinion is needed.

HALSEY, M. N.

(1041) NEW TRENDS IN ENFORCEMENT. Inst. Traffic Engin. Proc. 6: 94-98. 1935. [Processed.]

Engineering and enforcement; facts vs. opinions; police safety competi-tion; accident investigation; police yardsticks and indexes; selective enforcement; police traffic training; juvenile offenders; new approach to the violator; radio and traffic enforcement; speed control; engineers approach to police department; future combination of engineering and enforcement.

HEMMINGS, H. H.

(1042)Inst. Traffic Engin. Proc. 2: 72-82, illus. 1931. [Mimeographed.]

State income and motor-vehicle registration; use of vehicles; purchasing power of automobilists; automobile parking facilities; pavement costs and traffic; costs of traffic-light installation; regulation and enforcement; operation of vehicles.

HURLEY, J. F.

(1043)VEHICLE TURNING MOVEMENTS. Inst. Traffic Engin. Proc. 3: 34-38, illus. 1932. [Mimeographed.]

Diagrams show different methods of turning.

INSTITUTE OF TRAFFIC ENGINEERS, COMMITTEE ON EVOLUTION OF THE ART OF TRAFFIC CONTROL AND REGULATION. (1044)

REPORT. Inst. Traffic Engin. Proc. 3: 133-137. 1932. [Mimeographed.]

Development of the traffic control signal; development of street and highway planning and design; recommendations.

INTERNATIONAL ROAD CONGRESS.

(1045)1. TRAFFIC REGULATION IN LARGE CITIES AND THEIR SUBURDS; TRAFFIC SIGNALS; DESIGN AND LAYOUT OF ROADS AND ADAPTATION TO TRAFFIC REQUIREMENTS IN BUILT-UP AREAS. 2. PARKING AND GARAGING OF MOTOR VEHICLES. Reports [of delegates], 6-6-T, illus. Paris. 1930.

Reports submitted to the sixth congress held in Washington, D. C., 1930

"The design of regulations should be the responsibility of a competent technical agency of the Government."-No. 6, p. 1.

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KANSAS LEGISLATIVE COUNCIL, RESEARCH DEPARTMENT.

SAFETY REGULATION FOR MOTOR VEHICLES: SUMMARY OF THE REASONS FOR REGULATION OF DRIVER, CAR, AND HIGHWAY: EXPERIENCE OF OTHER STATES; AND THE PRESENT SITUATION IN KANSAS. Research report prepared for Council Committee on Highway Safety. 67 pp. Topeka, Kans., Legis. Council. Research Dept. 1936. [Mimeographed.] (Kans. Legis. Council. Research Dept. Pub. 45).

Keller, A. W.

STREET TRAFFIC CONTROL AND REGULATION IN EUROPE. Inst. Traffic Engin. Proc. 2: 102-107, 1931. [Mimeographed.]

The traffic conditions observed in Paris, Berlin, and London are described individually.

LEFFERTS, E. B.

A NEW PROCEDURE IN TRAFFIC LAW ENFORCEMENT. Natl. Safety Council Trans. (1928) 17 (3): 121-126, illus. c1929. Abstract in Amer. City 39 (6): 141-142, illus. 1928, under title "Year's Experience with the San Diego Plan of Traffic Law Enforcement."

Distinctive feature of the San Diego plan is charging of motorists with their own responsibility for avoiding traffic accidents instead of attempting to have officers spy on drivers at all times.

MCCLINTOCK, MILLER.

STANDARDIZATION FOR HIGHWAY SAFETY. Safety Engin. 71: 19-20, 22, illus. 1936.

Delivered to annual meeting, American Standards Association, December 11, 1935.

Need for standards for safety inspection of motor vehicles and for driving; uniformity in traffic laws and regulations; standards for road design and traffic signals.

MCCRACKEN, DWIGHT.

TRAFFIC REGULATION IN SMALL CITIES. 25 pp., illus. New York, Munic. Admin. Serv. 1932. (Munic. Admin. Serv. Pub. 26).

Bibliography, p. 25

Discusses such topics as the proper maintenance of through ways, speed restrictions, use of traffic control signals, parking provisions, and pedestrian safety.

MARSH, B. W.

REPORT ON TRAFFIC LAW OBSERVANCE AND ENFORCEMENT METHODS. Natl. Research Council, Div. Engin. and Indus. Research, Highway Research Bd. Proc. (1930) 10: 238-247, 1931; (1931) 11 (pt. 1): 412-430, illus., 1932.

Shows the relationship between enforcement and law observance and the need for traffic law enforcement in municipalities and presents facts concerning the records in a number of cities that are securing good or reasonably good results in traffic control together with the reasons for the improvements.

MARYLAND COMMISSIONER OF MOTOR VEHICLES. (1052) DIGEST OF THE REGULATIONS GOVERNING THE OPERATION OF MOTOR VEHICLES THROUGHOUT THE UNITED STATES, CANAL ZONE, HAWAII, AND THE CANADIAN PROVINCES OF ONTARIO AND QUEBEC, 1934. Compiled by E. Austin Baughman. 192 pp. Baltimore. [1934.]

MINNESOTA STATE DEPARTMENT OF HIGHWAYS.

SAFETY RULES AND REGULATIONS; ORGANIZATION FOR SAFETY. 32 pp. St. Paul, Minn., Dept. of Highways. 1935.

"In order to safeguard the public on our highways, and the men employed by the Department, the within Safety Regulations governing equipment, Rules governing operations, and Organization for Safety, are hereby prescribed."—p. 3.

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MISC. PUBLICATION 296. U. S. DEPT. OF AGRICULTURE 100

NATIONAL CONFERENCE ON STREET AND HIGHWAY SAFETY.

[UNIFORM VEHICLE CODE] . . AS REVISED AND APPROVED BY THE FOURTH NATIONAL CONFERENCE ON STREET AND HIGHWAY SAFETY, MAY 23-25, 1934. U. S. DEPARTMENT OF AGRICULTURE, BUREAU OF PUBLIC ROADS. 5 pts. Washington, Govt. Print. Off. 1934.

Contents: Act I, Uniform Motor Vehicle Administration, Registration, Certificate of Title and Antitheft Act; Act II, Uniform Motor Vehicle Oper-ators' and Chauffeurs' License Act; Act III, Uniform Motor Vehicle Civil Liability Act; Act IV, Uniform Motor Vehicle Safety Responsibility Act; Act V. Uniform Act Regulating Traffic on Highways.

(1055)

MODEL TRAFFIC ORDINANCES . . . AS REVISED AND APPROVED BY THE FOURTH NATIONAL CONFERENCE ON STREET AND HIGHWAY SAFETY, MAY 23-25, 1934. U. S. DEPARTMENT OF AGRICULTURE, BUREAU OF PUBLIC ROADS. 30 DD. Washington, U. S. Govt. Print. Off. 1936.

"The modern traffic ordinances contained herein supplement for municipalities the uniform vehicle code of recommended State legislation."-Foreword.

Pt. I. Model Municipal Traffic Ordinance; pt. 2. Model Traffic Administrative Ordinance; pt. 3, State Law Provisions Which Might be Included in Traffic Ordinance.

NATIONAL SAFETY COUNCIL, INC., PUBLIC SAFETY DIVISION.

GETTING CONVICTIONS FOR TRAFFIC ACCIDENTS: A LECTURE AND "FILM STRIP" FOR USE OF POLICE DEPARTMENTS, LOCAL SAFETY COUNCILS AND OTHER GROUPS TELLS HOW EVIDENCE IS GATHERED IN EVANSTON, ILL., BY AN ACCIDENT INVESTI-GATION SQUAD WITH TAPE AND CAMERA FOR THE CONVICTION OF DRIVERS WHO HAVE BROKEN LAWS IN CONNECTION WITH TRAFFIC ACCIDENTS. PRODUCED BY PUBLIC SAFETY DIVISION, NATIONAL SAFETY COUNCIL AND THE BUREAU OF ACCIDENT PREVENTION, EVANSTON POLICE DEPARTMENT. Amer. City 42 (5): 140-144, illus, 1930.

SIMPSON, H. S.

(1057)COUNTY HIGHWAY TRAFFIC CONTROL AND REGULATION. Mich. Univ. Conf. Highway Engin. Proc. 16: 123-135. 1930.

Outline of problem and information required to determine upon logical method of control; co-ordination of traffic activities; origin and destination studies; speed and delay surveys; intersection traffic surveys; accident analysis; traffic plan.

SOLARI, CESARE.

TRAFFIC REGULATION IN MILAN, ITALY. Inst. Traffic Engin. Proc. 4: 1-10, illus, 1933, [Processed.]

Diagrams show traffic flow at intersections and pedestrian traffic; tables show Italian Autostrada opened to traffic: street accidents in Milan during the first 6 months of 1933 summarized by causes and types; pictures show danger and directional signs.

UNITED STATES INTERSTATE COMMERCE COMMISSION.

SAFETY REGULATIONS: RULES AND REGULATIONS GOVERNING QUALIFICATIONS OF EMPLOYEES AND SAFETY OF OPERATION AND EQUIPMENT OF COMMON CARRIERS AND CONTRACT CARRIERS BY MOTOR VEHICLE. 37 pp., illus. Washington, U. S. Govt. Print. Off. 1937.

Qualifications of drivers: effective July 1, 1937; driving of motor ve-hicles: effective July 1, 1937; parts and accessories necessary for safe operation: effective July 1, 1937; reporting of accidents: effective April 1, 1937.

VAN DUZER, W. A.

(1060)REPORT ON STATE CONTROL OF TRAFFIC. Natl. Research Council, Div. Engin. and Indus. Research, Highway Research Bd. Proc. (1931) 11 (pt. 1): 430-433, illus. 1932.

Report of compilation of information concerning status of motor-vehicletraffic control in the various States, giving type and scope of controlling agencies.

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VAN DUZER, W. A.

ANONYMOUS

STUDY OF TRAFFIC LAW VIOLATIONS. Natl. Research Council, Div. Engin. and Indus. Research, Highway Research Bd. Proc. (1932) 12 (pt. 1): 369-379. illus 1933

Study of traffic practices at intersections in Washington, D. C., under control by stop signs and with no control. Includes vehicle speeds.

PEDESTRIANS

PEDESTRIAN CONTROL. Ark. Highways 5 (8): 10-11. 1928.

Pedestrian in full recognition of his own safety and of efforts made for his safety, invariably insists on exercising his inalienable rights to govern his own actions either on sidewalk or in roadway.

PEDESTRIAN USE OF HIGHWAYS. Minn. Municipalities 20 (1): 21-22, 32. 1935. Suggestions regarding legislation requiring pedestrians to walk on the left side of the road. Analysis of information received from 42 States regarding the control of pedestrians walking along the roadway in the rural districts.

SEPARATE SIGNALS FOR PEDESTRIAN TRAFFIC IN SAN FRANCISCO: CROSSWALKS AT COMPLICATED INTERSECTIONS HAVE "GO-AND-STOP" SIGNALS FOR PEDES-TRIANS-SAFETY ISLANDS LIGHTED. Engin. News-Rec. 104: 646-647, illus. 1930.

WITH OR FACING TRAFFIC.

Travelers Standard 22: 1-4, illus. 1934. Pennsylvania statistics show that rate of fatal accidents of persons walking toward traffic per accident of that type was 32.3 percent worse than rate of fatal accidents of persons walking with traffic per accident of that type.

BLANCHARD, A. H.

THE LEGAL RIGHTS OF PEDESTRIANS. Inst. Traffic Engin. Proc. 3: 95-116. [Mimeographed.] Abstract in Amer. Soc. Munic. Engin. Proc. 1932 (1932) 38: 520-529. 1933.

Bibliography, pp. 112-114. Discussion, pp. 115-116.

Significance of the pedestrian problem; responsibility for pedestrian accidents; summary of court procedure; legislative enactment and legal precedent define pedestrians' rights and duties; judicial interpretation of pedestrians' rights and obligations; the justifiable rights of pedestrians; improvement of relationship between motorist and pedestrian.

CONNECTICUT STATE DEPARTMENT OF MOTOR VEHICLES, SAFETY PROMOTION SECTION. (1067)

COMPLETE STATISTICAL PICTURE OF HOW, WHEN, WHERE, AND WHY PEDESTRIAN FATALITIES IN CONNECTICUT'S FOUR LARGEST CITIES ARE ASSUMING SUCH MAJOR PROPORTIONS IN RELATION TO THE ENTIRE TRAFFIC ACCIDENT PROB-LEM. 14 pp. Hartford, Conn. 1937. [Mimeographed.]

CRAIG, J. R.

(1068)

(1069)

KILLING THE PEDESTRIAN. Natl. Safety News 26 (6): 34, 57, illus. 1932. The person on foot often pays a heavy penalty for a slight error in judgment.

EAMES, E. H.

PEDESTRIAN CONTROL BY SIGNALS. Inst. Traffic Engin. Proc. 5: 6-14, illus. 1934. [Processed.]

Successful control of pedestrian by traffic signals depends primarily on a high degree of observance and obedience regardless of the type of color cycle used. A list is given of the factors which it is believed will be found of benefit in obtaining this observance.

ELDRIDGE, M. O.

(1070)SHOULD PEDESTRIAN TRAFFIC BE REGULATED. Amer. Road Builders' Assoc. Proc. 32: 121-125, illus. 1935.

Pedestrian classification; traffic violations by pedestrians; pedestrian regulation.

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HALSEY, M. N. (1071) PROTECTING PEDESTRIAŃS ON BURAL HIGHWAYS. Miss. Highways 3 (1): 12-13. 1933.
INSTITUTE OF TRAFFIC ENGINEERS, COMMITTEE ON PEDESTRIAN. (1072) PROTECTING FOOT TRAFFIC ON RURAL HIGHWAYS. Inst. Traffic Engin. Proc. 6: 106-112. 1935. [Processed.]
Safeguards for pedestrians walking along rural highways. Table, p. 112, shows mileage and types of rural sidewalks by States.
JENSEN, HOLGER. (1073) HOW TO CROSS STREETS SAFELY. Safety Engin. 68: 108, illus. 1934. Pedestrians should cross in "clock movement" direction.
JOHNSON, F. W. (1074) THE RUNAWAY HIGHWAY. All Ohio Safety Cong. Proc. 5: 608–615. 1932. American people in use of highways have as yet shown no disposition en masse to make sacrifices for common good. If pedestrian would pause "six seconds for safety," most accidents would be prevented.
LEFFERTS, E. B. (1075) THE PEDESTRIAN PROBLEM. Safety Engin. 70: 93-94. 1935. Extract in Calif. Safety News 19 (3): 12. 1935. Address delivered at the Western Safety Conference, San Francisco, June 13, 1935.
NATIONAL SAFETY COUNCIL, INC. (1076) PEDESTRIAN SUBWAYS FOR CHILDREN. 2 pp. Chicago. 1935. [Mimeo- graphed.] (Natl. Safety Council Pub. Safety Memo. 12.)
 SIMPSON, R. E. (1077) PEDESTRIAN ACCIDENTS. Safety Engin. 64: 260. 1932. Also in Travelers Standard 21: 30-34, 1933, under title "Lo! The Poor Pedestrian." Excerpts in Elect. World 100: 753-754. 1932. Address presented before the New York Section of the American Institute of Electrical Engineers. November 15, 1932.
 T'AYLOB, C. P. (1078) WHY TRAFFIC ACCIDENTS HAPPEN: PEDESTRIAN THOUGHTLESSNESS AND DRIVERS' POOR JUDGMENT FOUND TO BE CHIEF CAUSES. Jour. Soc. Automotive Engin. 22: 317–318. 1928. Also in Nation's Traffic 3 (5): 34–35. 1929. Results of a traffic survey made at Rose and Grove Streets, Berkeley, Calif.
TRAVELERS INSURANCE COMPANY. (1079) A STUDY OF VARIOUS CIRCUMSTANCES INVOLVED IN THE OCCURRENCE OF AUTOMO- BILE ACCIDENTS AFFECTING PEDESTRIANS. 13 pp. Hartford. Conn. 1933 [Mimeographed.]
VAN DUZER, W. A. ANALYSIS OF PEDESTRIAN ACCIDENTS. Inst. Traffic Engin. Proc. 5: 1-5. 1934. [Processed.]
Discussion, pp. 3–5. A study of pedestrian accidents in the City of Washington.
WATSON, HENEY. (1081) SOME REFLECTIONS ON PEDESTRIAN CROSSINGS. Roads and Road Construct. 13: 120-121 158-159 173-174 1925
Implications of granting priority; the needs of pedestrians and vehicle occupants where their paths conflict; custom in this matter and the diffi- culties to be observed in the use of these crossings.
DRIVERS' LICENSES
ANONYMOUS. (1082)

DRIVER'S LICENSE IN MINNESOTA. Minn. Municipalities 18 (11): 546-547. 1933.

How to procure a license; financial responsibility. Upon revocation of the driver's license the financial-responsibility act begins to operate.
ANONYMOUS.

- DRIVERS' LICENSE LAW EFFECTIVE NEXT MONTH. S. C. Highways 1 (3): 1–2, 8. 1930.
- Gives provisions of the drivers' license law in South Carolina, effective October 1, 1930.

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- DRIVER'S LICENSE LAW PASSED BY SOUTH CAROLINA: IS TWENTY-FIRST STATE TO ESTABLISH CONTROL OVER PRIVATE AUTO OPERATOR. Pub. Safety 4 (12): 14-15, illus. 1930.
- DRIVER LICENSE LEGISLATION LIKELY IN FOUR MORE STATES. Automotive Indus. 75: 798, 1936.

Driver-license legislation is to be made administration measures in Illinois, Oklahoma, Missouri, and Tennessee.

(1086)

MASSACHUSETTS EXAMINES ELDERLY AND ACCIDENT-PRONE OPERATORS. Amer. Assoc. Motor Vehicle Administrators Bull. 1 (3): 7. 1936. [Mimeographed.]

Beginning September 1936 all applicants age 65 or over who apply for renewal of their driver's licenses are to be reexamined.

(1087)

MOTOR VEHICLE OPERATOR'S LICENSE. Nebr. Highways 2 (9): 3. 1929. Gives the provisions of the motor-vehicle-license law which was to go into effect September 1, 1929.

(1088)

PRIVILEGE OF NON-RESIDENTS FROM CERTAIN STATES TO OPERATE ANY MOTOR VE-HICLE IN THE DISTRICT OF COLUMBIA. Amer. Assoc. Motor Vehicle Adminrs. Bull. 1 (3): 3. 1936. [Mimeographed.]

Lists States in which methods of securing operators' permits are identical with those of the District of Columbia.

(1089)

PROGRESS REPORTED IN DRIVERS' LICENSE LEGISLATION. Pub. Safety 9 (5): 32. 1935.

Reports from various States which have been considering driver-license legislation.

(1090)

SPEED ENACTMENT OF DRIVERS' LICENSE LAWS. Pub. Safety 11 (6): 52. 1936. At least 18 States are staging definite campaigns for passage of standard drivers' license laws or to bring existing State laws up to standard.

(1091)

WHY DRIVERS' LICENSE LAWS WITH EXAMINATIONS ARE NEEDED. Mich. Roads and Airports 28 (12); 3-5. 1931.

Active campaigns to bring about the enactment of drivers' license measures with examination and test features in conformity with the standard uniform license act of the National Conference on Street and Highway Safety are in progress in Ohio, Illinois, Minnesota, Montana, Idaho, Oregon, Utah, Nevada, Virginia, North Carolina, Georgia, Alabama, and Tennessee.

Gives important features of the drivers' license law, purpose of law, and its advantages.

AMERICAN ROAD BUILDERS' ASSOCIATION, DIVISION OF CITY OFFICIALS, COMMITTEE ON TRAFFIC. (1092)

TRAFFIG LAW ENFORCEMENT, DRIVERS' PERMITS. Amer. Road Builders' Assoc. Proc. 27: 453-456. 1930.

ATWOOD, O. E.

(1093)

 WHO'S WHO OF BAD DRIVERS. Amer. Assoc. Motor Vehicle Adminrs. Bull. 1
 (3): 9-11. 1936. [Mimeographed.] Address before the Police Chiefs Convention in Grand Rapids, August 4, 1936.

Urges the establishment and operation of central violation files for reference when passing on application for renewal of driver's license.

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BAKER J. S.

(1094)

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BETTER EXAMINATION FOR AUTOMOBILE DRIVERS. Natl. Safety News 23 (1): 14-16, 1931.

Model examination for applicants for drivers' licenses described in this article is compilation of best practice observed in States which have drivers' license laws.

EXAMINATIONS FOR DRIVERS' LICENSES. Mich. Univ. Conf. Highway Engin. Proc. 18: 229-239. 1932.

Discussion, pp. 237-239.

Topics included are: Physical and mental condition; knowledge of laws; driving demonstration; classification of the States according to the licensing situation in each.

(1096)IOWA TRAINS EXAMINERS FOR DRIVERS. Pub. Safety 9 (9): 13-14, illus. 1935. Iowa becomes the first Midwestern State to have corps of specially trained, full-time men for examining applicants for drivers' licenses.

BARBER, A. B.

(1097)

REDUCING THE TOLL OF TRAFFIC. Nation's Business 17 (3): 132. illus. 1929. Includes a map showing the status of drivers' license laws in the various States.

BROWN, E. G.

(1098)

ENACTING A DRIVERS' LICENSE LAW. Va. Munic. Rev. 8: 146-147. 1931. Gives details of events leading up to the passage of a drivers' license act in Kansas, March 14, 1931.

"I would say if you started into a State that did not have this law, that the thing to do is to organize a Safety Council and work through the American Legion and the Chambers of Commerce."

BROWN, H. D.

(1099)

AN EFFECTIVE DRIVERS' LICENSE LAW FOR MICHIGAN. Mich. Univ. Conf. Highway Engin. Proc. 17: 43-47. 1931. Also in Mich. Roads and Airports 28 (11): 21-22. 1931.

Law passed in 1919 is ineffective because it does not contain provisions necessary to meet existing conditions.

BURNS. R. V.

MATTERS OF INTEREST TO OUR MOTOR VEHICLE USERS. Police Jour. 21 (5): 9-11. 1935.

Discusses kinds of drivers' licenses, and the extent to which nonresident licenses are honored, also extent to which nonresident registration is honored.

CAMERON, W. H.

(1101)HOW THE STATES ADMINISTER DRIVERS' LICENSE LAWS. Natl. Safety News 22 (4): 81-82, 140, 1930.

Summarizes details of procedure by which drivers' license laws are administered and enforced.

COMMONWEALTH CLUB OF CALIFORNIA.

(1102)WHO SHOULD DRIVE. Commonwealth Club Calif. Trans. 30 (1): 1-53. 1935. (The Commnwealth (pt. 2) 11 (44): 1-53.)

"The Commonwealth Club of California, however, has in this report endeavored to answer the question solely in the interest of saving the lives and limbs of as many drivers and pedestrians as possible.

"This present Transaction is a condensation of the proceedings of the Club's dinner meeting held on this topic in the Borgia Room of the Hotel St. Francis, San Francisco, August 29th, 1935. It is preceded by a research report on driver tests in this and other States, the basis of the evening's discussion "

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Cox. W. J.

(1103)THE DRIVER'S LICENCE LAW REAPPRAISED: A STUDY OF AUTOMOBILE FATALITY TRENDS IN RELATION TO DISTRIBUTION OF POPULATION. Inst. Traffic Engin. Proc. 6: 32-45, illus, 1935, [Processed.]

Criticism of the discussion of fatality trends in relation to tax-paid gasoline consumption, prepared by the National Safety Council and appearing in the National Safety News for August 1934.

EYNON, B. G.

(1104)

THE LICENSING OF MOTOR VEHICLE OPERATORS AND THE ORGANIZATION OF A. STATE HIGHWAY PATROL. Highway Topics 7 (4): 11-13, 15-16, 21-22. 1929

Discusses practice in Pennsylvania.

FORNEY. R. L.

(1105)HOW SAFE IS YOUR STATE? FIGURES -AND MORALS ON THE AUTOMOBILE ACCI-DENT PROBLEM. State Govt. 9: 169-171. 1936.

A table, by States, gives drivers' license laws, p. 168.

HALSEY, M. N.

(1106)

VISION TESTS FOR MOTOR VEHICLE DRIVERS. 18 pp. New York, Natl. Soc. for

the Prevention of Blindness. 1933. [Mimeographed.] (Fourth Annual Greater New York Safety Conf. 1933, The Eye, Session 4, Paper 12.) Are drivers' examinations what are needed? What is the purpose of drivers' examinations? What has been the effect of drivers' examinations and license laws? What would we like to know about an operator? The place of the eye in drivers' examinations: ability to recognize a hazard.

HANNA, W. E.

DRIVERS' LICENSE AND HOW IT WORKS. Ohio Motorist 27 (1): 4, 1936.

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MOTORISTS-KNOW YOUR STATE LAWS! Ohio Motorist 26 (12): 4. 1936 Discusses the drivers' license law.

HARNETT, C. A.

DRIVERS' TESTS FOR AUTOMOBILE ACCIDENT REDUCTION. Safety Engin. 70: 1935. 139 - 140.

Delivered at the 6th annual Greater New York Safety Conference. New York State has adopted two methods of preventing unfit persons from operating motor vehicles, first by preventing individuals who fail to prove their ability from securing licenses, and second, by suspension or revocation,

HOUSLEY, G. J.

DRIVERS' LICENSE LAW: A SERIES OF ARTICLES DEVOTED TO THE SUCCESSFUL OPER-ATION OF A LIFE-SAVING MEASURE OF RESTRICTED MOTORING. 20 pp. Chicago, Chicago Daily News, 1929. (Chicago Daily News Reprint 36.)

ILLINOIS CONFERENCE ON HIGHWAY SAFETY LEGISLATION. (1111)

DRIVERS' LICENSE LAWS OF 30 STATES, FINANCIAL RESPONSIBILITY LAWS OF 21 STATES: HOW THEY COMPARE WITH HOUSE BILLS NOS. 47 AND 157, SENATE BILLS NOS. 100 AND 101. 18 pp., illus. Chicago. [1935?]

"The feeling that a discussion of House Bills Nos. 47 and 157 and Senate Bills Nos. 100 and 101 will be enlightened by reference to laws of similar character in other jurisdictions has prompted the Illinois Conference on Highway Safety Legislation to prepare the information in the following pages."

(1112)KALISKI, DAVID, and BINGHAM, W. V.

PHYSICAL AND MENTAL EXAMINATION OF MOTOR VEHICLE DRIVERS. East. Conf. Motor Vehicle Adminrs. [Addresses.] [New York City.] 1935: 19-24. 1935. Also in Safety Engin. 70: 203-204. 1935.

Every person who applies for a license to operate a car should have a standardized medical examination to determine his physical fitness. The license of a driver involved in a major accident should be automatically suspended until such time as the person involved has been sufficiently examined.

KOEHLER, A. W.

(1113)PROGRESS IN UNIFORM TRAFFIC LEGISLATION. Pub. Safety 7 (5): 16-17, 1933. Data on drivers' license laws in various States.

LAUER, A. R.

ARE DRIVERS' EXAMINATIONS SCIENTIFIC? Natl. Safety News 23 (4): 42, 44, 87. 1931.

Tests used in examining drivers should be of value in diagnosing or predicting accident proneness. Some of our present tests seem to be of doubtful utility.

(1115)CAN YOU PICK THE SAFE DRIVERS? Natl. Safety News 24 (6): 25-27. 1931 Describes the methods of testing motor-vehicle operators.

Paper delivered before the Delivery, Taxicab, and Bus Section, 20th annual safety congress.

LONG. JOHN.

SUSPENSION AND REVOCATION OF DRIVERS' LICENSES AS AN ENFORCEMENT AGENCY. East. Conf. Motor Vehicle Administrators [Addresses] [New York City] 1935: 50-61. 1935. [Mimeographed.]

Safe cars, maintenance, safe highways, traffic laws, enforcement, safety instruction in the schools, safety education of the general public, aims and functions of a state-wide safety organization.

MATTHEWS, W. W.

WHAT A DRIVERS' LICENSE LAW WILL DO. Natl. Safety News 21 (5): 40, 42. 1930. Excerpts in Pub. Safety 4 (4): 20-21, 1930, under title "Points out Virtues of Drivers' License Law."

Abstract of an address before the eighth annual Midwest Safety Conference, Chicago, March 18.

When administered wisely a drivers' license law provides record of operators, methods of eliminating unfit, and effective means of discipline.

NATIONAL SAFETY COUNCIL. INC.

SAVING LIVES THROUGH A DRIVERS' LICENSE LAW. 16 pp., illus. Chicago, Natl. Safety Council, [1936.]

Need for a standard drivers' license law; vehicle death rates; how the standard drivers' license law works; how the examinations are conducted; what fee should be charged; adopting the standard drivers' license law.

-. COMMITTEE ON THE DRIVER.

EXAMINING APPLICANTS FOR DRIVERS' LICENSES. 30 pp., illus. Chicago, National Safety Council, Inc. 1934.

"A manual for examiners, prepared under the supervision of the National Safety Council Committee on the Driver and approved by the Eastern Conference of Motor Vehicle Commissioners."

RHODES. J. O., JR.

CHANGES IN TRAFFIC LAWS. Va. Highway Users Mag. 4 (2): 16. 1936. New law relating to traffic control passed by the 1936 General Assembly of Virginia calls attention to provisions regarding revocation of license.

SCHLAMP, G. J.

(1121)THE REGULATION OF MOTOR-VEHICLE OPERATORS THROUGH LICENSES. Mich. Univ. Conf. Highway Engin. Proc. 22: 28-31, 1936. Abstract in Mich. Roads and Construct. 33 (11): 4. 1936.

License defined; tax measure or regulation; whom does the present law restrain; revocation; identification; road tests; arrest; remedies.

SCOTT, J. V.

DRIVERS' LICENSES: AN APPEAL TO THE FLEET OPERATORS OF 32 STATES IN BEHALF OF DRIVERS' LICENSE LAWS. Power Wagon 49 (336): 10-13. 1932. Lists States having laws.

STOECKEL, R. B.

THE NEW EXAMINATION. Conn. Dept. Motor Vehicles Bull. 81, 4 pp. Hartford. 1931.

Searching for safe drivers; fairness demanded; road test.

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STOECKEL, R. B.

RE-EXAMINATION: PERIODIC TESTS PROPOSED TO ELIMINATE INCAPABLE DRIVERS AND DELIBERATE OFFENDERS—CHARACTER TESTS—NEED FOR SURVEILLANCE— DORMANT PUBLIC SENTIMENT. Conn. Dept. Motor Vehicles Bull. 61, 4 pp. Hartford. 1929. Also in Nation's Traffic 2 (12): 13-14. 1929.

VAN DUZER, W. A.

(1125)

MOTOR VEHICLE ACCIDENTS AS REFLECTED BY PSYCHOLOGICAL TESTS AND REACTION METER. Natl. Research Council, Div. Engin. and Indus. Research, Highway Research Bd. Proc. (1933) 13 (pt. 1): 348-351. 1934.

Results of psychological test tried in District of Columbia, and of tests with reaction meter devised by Roy Brown, of Firestone Rubber Co., at George Washington University, and by the District of Columbia Department of Vehicles and Traffic.

Additional information acquired since that time is published in Proc. (1934) 14 (pt. 1): 382-383, 1935.

(1126)

(1127)

SUSPENDING LICENSES REDUCES ACCIDENTS. Amer. City 51 (4): 97, illus. 1936.

Charts showing daily traffic accidents involving fatalities, personal injuries, and property damage, District of Columbia, January and February 1936.

WESCOTT. M. E.

DRIVERS' LICENSE LAWS IN OPERATION. Natl. Safety News 19 (5): 19-21, 1929.

Summary of methods of administration in ten States and the District of Columbia.

WHITFIELD, R. N.

REASONS FOR NEED OF AUTO DRIVERS LICENSE LAW. Miss. Highways 3 (1): 8 illus. 1933.

Gives the provisions of the proposed law.

(1129)

(1132)

(1133)

((1128))

THE SLAUGHTER OF THE INNOCENTS-A REMEDY SUGGESTED. Miss. Highways 5 (3): 11, 32. 1936.

Advocates uniform drivers' license law for Mississippi.

WILLIAMS, S. J.

DRIVERS' LICENSE LAWS ARE REDUCING ACCIDENTS. Natl. Safety News 26 (4): 42–43, illus. 1932. Also in Pub. Safety 6 (10): 6–7, 24, illus. 1932.

The experience of States having standard drivers' license laws shows their value in curbing motor-vehicle fatalities.

DRIVERS' LICENSE LAWS ARE SHOWING RESULTS. Natl. Safety News 22 (3): 13-14, 110-111, illus. 1930.

Nine States which have passed drivers' license laws with examinations since 1916 have had 29 percent fewer motor vehicle fatalities than they would have had if they had experienced the same percentage increase as the other States.

DRIVERS' LICENSE LAW STUDY SHOWS 22,000 LIVES SAVED: A REVIEW. Pub. Safety 4 (9): 3-6, illus. 1930.

PROGRESS IN DRIVERS' LICENSE LEGISLATION. Pub. Safety 5(4): 4-5. 1931. (1134)

WHAT DRIVERS' LICENSE LAWS CAN ACCOMPLISH. Mich. Univ. Conf. Highway Engin. Proc. 17: 35-42. 1931. Also in Mich. Roads and Airports 28 (17): 3. 1931.

Discussion, pp. 37-42.

In every one of the 11 States having a standard license law, including the examination of drivers, the trend of accidents has been downward.

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WILLIAMS, S. J.

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WHAT CAN WE EXPECT OF DRIVERS' LICENSE LAW? Natl. Safety News 18 (6): 23-24, 54, illus. 1928. Also in Good Roads 72: 213-214, 216, illus., under title "The Importance of the Drivers' License Laws."

"Properly administered, a drivers' license law may be expected to reduce motor vehicle fatalities about 20 per cent. This conclusion based on the records of States having such laws."—p. 23.

MOTOR-VEHICLE INSPECTION

ANONYMOUS.

AN ANALYSIS OF COMPULSORY INSPECTION IN EIGHTEEN STATES. Motor Truck News 25 (10) : 6-7, 20. 1936.

COMPULSORY VEHICLE-INSPECTION REDUCES ACCIDENTS IN MEMPHIS. Amer. City 49 (10): 74, illus. 1934.

Memphis was the first city to pass an ordinance providing for compulsory inspection of all motor vehicles owned by its citizens.

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(1139)

CONDITION OF MOTOR VEHICLES IN ACCIDENTS. Travelers Standard 24: 141-143, illus. 1936.

FIRE DEPARTMENT INSPECTS VEHICLES AT BILLINGS, MONT. Amer. City 51 (1): 15, illus, 1936.

Billings adopted an ordinance demanding the thrice-yearly inspection of local motor cars.

(1140)

MORE ON COMPULSORY MOTOR-VEHICLE INSPECTION BY CITIES AND STATES. Amer. City 49 (11): 64-65, illus. 1934.

The advantages to the public are: Adequate inspection; definite standards for the quality of garage service; continuous dissemination of safety information.

Based on material prepared by G. E. Weaver.

(1141)

- MUNICIPAL CAR-LIFE EXTENSION INSTITUTE TO SAVE THE CAR OWNER EXPENSE AND TROUBLE. Amer. City 50 (4): 75, 1935.
 - Describes the Memphis plan of compulsory motor-vehicle inspection.

(1142)

POLICE CHIEFS FAVOR VEHICLE INSPECTION. Amer. City 51 (3): 97. 1936. Nineteen out of twenty-one police chiefs sending in data on the traffic situation in their cities stated that they are in favor of compulsory motor-vehicle inspection.

CANNING, W. S.

(1143)

MOTOR VEHIOLE INSPECTION. Natl. Research Council Div. Engin. and Indus. Research, Highway Research Bd. Proc. (1935) 15: 287-293. [1936.]

"As one means of decreasing the number of motor-vehicle accidents, several States have adopted compulsory mechanical inspection. This report is an analysis of the effect of such inspection upon the accident rate. Several States, having a total motor vehicle registration of about 7,000,000 vehicles, have supplied material from which this study has been made." p. 287.

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MOTOR VEHICLE INSPECTION REPORTS SHOW THAT MECHANICAL DEFECTS PLAY SMALL PART IN HIGHWAY ACCIDENTS. Automotive Indus. 74: 336-339, illus. 1936.

CARRUTHERS, A. C.

CROSS, W. L., JR.

COMPULSORY INSPECTION GETS RESULTS IN CONNECTICUT. Pub. Safety 10 (2): 26-27, 38. 1936.

WHAT MOTOR VEHICLE INSPECTION REVEALS IN PENNSYLVANIA. Safety Engin. 67: 233-234, illus. 1934.

DENNIS, F. L.

WHAT COMPULSORY MOTOR-VEHICLE-SAFETY INSPECTION IS. Munic. Index 12: 450-453, 1936.

NATIONAL SAFETY COUNCIL, INC.

PERIODIC INSPECTION OF MOTOR VEHICLE EQUIPMENT. Rev. Ed., 3 pp. Chicago. 1935. [Mimeographed.] (Natl. Safety Council Pub. Safety Memo. 21.)

REEDER E. J.

MOTOR-VEHICLE EDUCATION AT EVANSTON, ILL., BUREAU, Amer. City 50 (9): 87, 1935,

Vehicle inspection station not only checks vehicle but also gives timely pointers to operator on safe driving practices.

(1150)

THE VALUE OF COMPULSORY VEHICLE INSPECTION. Municipality 30: 169, 184. 1935

Prepared for the American Municipal Association, the national federation of State leagues of municipalities.

Municipalities are reducing accidents by requiring that motor vehicles be in good condition.

STEDMAN, HARRY, and COE. BURTON.

A REPORT OF ONE AND ONE-HALF YEARS OF COMPULSORY MOTOR VEHICLE INSPEC-TION IN DES MOINES. Iowa State Col., Highway Safety Conf. Proc. 1: 93-95. 1936. [Mimeographed.]

WEAVER, G. E.

RELATION OF VEHICLE INSPECTION TO HIGHWAY SAFETY. Automobile Topics 121: 388-389, 1936,

From a paper at the annual conference on Highway Engineering at Urbana, Ill.

TRAFFIC SIGNS AND SIGNALS

ANONYMOUS.

ONE IN FORTY MILLION. (Editorial) Engin. News-Rec. 108: 420. 1932.

First fatal accident in the Holland Tunnel, coming after 4 years of operation and safe passage of 48 million vehicles, serves to emphasize inherent safety of traffic-control system in tubes and efficiency of policing system. Accident due to act of pure recklessness on part of driver.

AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIALS.

MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS. APPROVED AS AN AMERICAN STANDARD, AMERICAN STANDARDS ASSOCIATION. NOVEMBER 7, 1935. Prepared by a joint committee of the American Association of State Highway Officials and the National Conference on Street and Highway Safety. 166 pp., illus. Washington, D. C. 1935. (Amer. Standard Assoc. D6-1935.)

BAKER, J. S.

(1155)TWO OUT OF EVERY THREE SIGNALS REDUCE ACCIDENTS. Pub. Safety 5 (2): 6-9, illus. 1931.

This is the first of a series of six articles. The discussion covers only the effect of signals on accidents and not their use for relieving congestion.

The other five articles are published in the same periodical under the following titles: (2) Conditions Under Which Signals Will Reduce Acci-dents. 5 (3): 19-22, illus.; (3) How Traffic Signals Affect Typical Inter-sections 5 (4): 12-15, illus.; (4) Getting the Facts for Signal Planning 5 (5): 12-15, illus.; (5) Planning Signals That Will Prevent Accidents 5 (6): 27-31, illus.; (6) Reducing Accidents at Signalized Intersections. 5 (7): 27-30, illus. 1931.

BROWN, L. R.

(1156)

THE TRAFFIC SIGNAL VS. THE FULL STOP AT OUTLYING INTERSECTIONS. Inst. Traffic Engin. Proc. 3: 1-9, illus. 1932. [Mimeographed.]

Includes chart for computing time lost in stopping and starting at a boulevard stop, and a table of stopping distances and lost time.

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CANNING, W. S.

UNIFORMITY IN TRAFFIC SIGNS AND SIGNALS. Canad. Good Roads Assoc. Proc. 19: 82-93, illus, 1932.

"Considerable pioneering work along these lines had been done in the United States, resulting in the development of certain recommended stand-ards for signs and signals."

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(1157)

REPORT OF SUBCOMMITTEE ON TRAFFIC REGULATION IN MUNICIPALITIES Nat Research Council, Div. Engin, and Indus, Research, Highway Research Bd. Proc. (1934) 14 (pt. 1): 410-428. 1935.

"A study of traffic problems and their solution without large expenditure of funds for municipalities under 100,000 population. Among the subjects discussed are: Best methods of adapting obsolete or inadequate signal equipment to modern conditions; principles of sign and signal installation; outline of parking regulations, their need and method of analysing. References are given which can be used for a study in detail of the subjects discussed."-p. 410.

DODDS, R. B., JR.

(1159)

(1160)

SOME ASPECTS OF TRAFFIC-ACTUATED TRAFFIC CONTROL. Inst. Traffic Engin. Proc. 2: 50-71, illus. 1931. [Mimeographed.]

Glossary of terms; brief history of development; traffic-actuated control and heavy traffic: traffic study at intersection with balanced heavy traffic: theoretical discussion of cycle length vs. delay.

EAMES, E. H.

TRAFFIC ACTUATED PROGRESSIVE SYSTEMS. Inst. Traffic Engin. Proc. 7: 46-55. illus. 1936.

Fundamentals of traffic-actuated co-ordination; mutual co-ordination; proper accommodation for side-street traffic; full-vehicle-actuated progressive systems; practical variations available; repeat pulsing; master timing equipment; automatic adjustment for other traffic factors; periodic resetting unnecessary.

GOODRICH, E. P.

(1161)

APPLICATION OF MATHEMATICS TO TRAFFIC ENGINEERING. Inst. Traffic Engin. Proc. [Semi-Ann. Meeting] 1931: 26-57, illus. [1931.] [Mimeographed.] Points out the theoretical relationship which should exist between cycle ratios and other factors and proportionate traffic densities, crossing time

quantities, etc.

GREAT BRITAIN MINISTRY OF TRANSPORT, DEPARTMENTAL COMMITTEE ON TRAFFIC SIGNS (1162)

REPORT. 58 pp., illus. London, H. M. Stationery Off. 1933.

Warning, prohibitory, mandatory, and informative markings; white lines and other traffic markings on the carriageway; light signals.

HALSEY, M. N.

MASSACHUSETTS SIGNAL CODE A STEP TOWARD SAFETY. Natl. Safety News 20 (6): 15-16, 62, 64, illus. 1929.

Methods by which basic uniformity in traffic signal lights is obtained by requiring installations to have the written approval of the State department of public works.

HALVORSON, C. A. B., JR.

TRAFFIC SIGNALS. Amer. Soc. Munic. Engin. Proc. (1933) 39: 150-156, illus. 1934.

Discusses light distribution, methods of obtaining light distribution, reflectors, lenses, lamps, present trends, and safe pedestrian interval.

HARRISON, H. H., and PRIEST, T. P.

AUTOMATIC STREET TRAFFIC SIGNALLING (APPARATUS AND METHODS). 187 pp. illus. London, Sir. I. Pitman & Sons, Ltd. 1934.

The authors discuss the evolution, types, controller mechanisms, signal and controller mountings, elementary theory of traffic movement, and electromatic vehicle-actuated system and its applications.

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HERBER, J. L. (1166)SAFETY-SIGNALS AND SIGNS IN PENNSYLVANIA. Pa. Safety Cong. Proc. 1928: 200-205. 1928. (Pa. Dept. Labor and Indus. Spec. Bull. 19.) ILGNER, H. F. (1167)PLANNING TRAFFIC FOR EASIER ENFORCEMENT. Inst. Traffic Engin. Proc. 6: 22-31, illus, 1935, [Processed.] Practices and experiences in Milwaukee discussed under (1) Operation of traffic control devices, (2) allocation of street space, and (3) location of traffic control devices. INSTITUTE OF TRAFFIC ENGINEERS, COMMITTEE ON EVOLUTION OF THE ART OF TRAFFIC CONTROL AND REGULATION. (1168)REPORT. Inst. Traffic Engin. Proc. 3: 133-137, 1932. Development of traffic control signal; development of street and highway planning and design. -, COMMITTEE ON STANDARDS AND SPECIFICATIONS. (1169)VERTICAL ADJUSTABLE FACE TRAFFIC CONTROL SIGNAL HEADS. Inst. Traffic Engin, Proc. 5: 125-127, 1934, [Processed.] -. RESEARCH COMMITTEE. (1170)REPORT. Inst. Traffic Engin. Proc. 7: 80-81, illus. 1936. Suggestions for a general statement of principles concerning the use of signs at horizontal and vertical curves. JAMES. E. W. (1171)ROAD SIGNS, ROUTE MARKING AND SIGNALS AS SAFETY APPLIANCES : REVIEW OF GENERAL PRINCIPLES, PROGRESS IN STANDARDIZATION, FORM AND COLOR, NIGHT SIGNALS, ALSO OF PROGRESS MADE IN ROADWAY MARKING AND ROUTE SIGNS AND WARNING SIGNALS. Engin. News-Rec. 106: 19-21, illus. 1931. JANDA, H. F., and VOLK. W. N. (1172)EFFECTIVENESS OF VARIOUS HIGHWAY SIGNS. Natl. Research Council, Div. Engin. and Indus. Research, Highway Research Bd. Proc. (1934) 14 (pt. 1): 442-447, illus. 1935. Twenty standard signs, such as are used in Wisconsin and in Pennsylvania were used in the laboratory tests. The signs were placed 75 feet from the subject and the reaction time was measured by a chronoscope reading to 14000 of a second: 160 drivers were tested. LEAGUE OF NATIONS. ADVISORY AND TECHNICAL COMMITTEE FOR COMMUNICATIONS AND TRANSIT, PERMANENT COMMITTEE ON ROAD TRAFFIC. (1173)REPORT . . . REGARDING ROAD SIGNALLING. 11 pp., illus. [Geneva, 1928.] (Ser. League of Nations Pub. 8. Transit. 1928. VIII. 1.) MASSACHUSETTS STATE DEPARTMENT OF PUBLIC WORKS. (1174)STANDARD CODE FOR TRAFFIC SIGNS, WARNING BEACONS AND ISLANDS. 73 pp., illus. Boston, Mass., Dept. Pub. Works. 1931. (Traffic Bull. 3.) MILLS. F. W. (1175)THE COMPARATIVE VISIBILITY OF STANDARD LUMINOUS AND NONLUMINOUS HIGH-WAY SIGNS. Pub. Roads 14: 109-128, illus. 1933. Summary in Roads and Streets 76: 358, 1933. Report of investigations by the United States Bureau of Public Roads, in cooperation with the National Bureau of Standards. MORRISON, R. L. (1176)COMPARATIVE EFFICIENCY OF STOP SIGNS AND STOP-AND-GO SIGNALS AT LIGHT-TRAFFIC INTERSECTIONS. Inst. Traffic Engin. Proc. 2: 39-49, 1931. [Mimeographed.] Observations at street intersections in Ann Arbor made by the students in the traffic-control classes at the University of Michigan. (1177)NACHOD, C. P. FIGURING THE BEST CYCLE LENGTH FOR TRAFFIC SIGNALS, AND THE DELAYS PRO-DUCED BY THEM. Inst. Traffic Engin. Proc. 5: 19-33, illus. 1934. [Processed.]

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NEW JERSEY TRAFFIC COMMISSION.

A STANDARD CODE FOR TRAFFIC CONTROL SIGNAL INSTALLATION AND OPERATION. 54 pp., illus. [Trenton.] 1931. (Traffic Code no. 1.)

SORENSON, L. J.

WHAT IS NEW IN TRAFFIC SIGNALING? Inst. Traffic Engin. Proc. 6: 46-56, illus. 1935. [Processed.]

Discussion, by William C. Brandes, pp. 48-56, includes the history of Michigan Avenue [Chicago], and its signal system. Additions to signal practices may be entered in three classes: (1) Pedestrian indication; (2) safety amber sequence: (3) use of flashing green.

VEY, A. H.

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(1179)

EFFECT OF SIGNALIZATION ON MOTOR VEHICLE ACCIDENT EXPERIENCE. Inst. Traffic Engin. Proc. 4: 56-65, illus. 1933. [Processed.]

Material and facts included in three independent "before" and "after" studies made in different sections of the country, and observations of the usefulness of the signals, both from the viewpoint of accident prevention and traffic expedition.

WRIGHTON, J. C.

(1181)

SOME BRITISH APPLICATIONS OF VEHICLE ACTUATED TRAFFIC SIGNALS. Inst. Traffic Engin. Proc. 4: 85-102, illus. 1933. [Processed.]

Electro-matic system as developed for use at Trafalgar Square and a certain section of Piccadilly, in London.

COMMERCIAL VEHICLES

ANONYMOUS.

ACCIDENTS-WHAT THE FIGURES SHOW. Bus Transportation 9: 260-261. 1930.

Gives comparative tables showing personal injuries to passengers and property damage accident experience.

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(1182)

BETTER DRIVING, FEWER ACCIDENTS. Bus Transportation 7: 553-556, illus. 1928.

"The value of careful selection and training of drivers is recognized as an essential in traffic building and lowered maintenance costs."

(1184)

COMMERCIAL VEHICLES, "MENTAL FOG," AND ACCIDENTS. Travelers Standard 16: 161-172, illus. 1928.

Commercial-vehicle versus pleasure-car driving; explanation of "mental fog"; thorough inspections are important; testing and adjusting brakes; using the engine as a brake; keeping the steering gear in good condition; loading precautions; danger of mass driving.

(1185)

DRIVER HOURS—HOW WILL THE RECOVERY PROGRAM AFFECT THEM? REVIEW OF STATE LEGISLATION LIMITING DRIVER HOURS AND PROSPECT OF FUBTHER CUR-TAILMENT. Power Wagon 51 (344): 8-11. 1933.

(1186)

HOW COMPANIES HANDLE HIGH-ACCIDENT DRIVERS: INQUIRY REVEALS VARIED WAYS OF TREATING AND CORRECTING ACCIDENT-PRONE OPERATORS. Pub. Safety 7 (5): 18–19. 1933.

Inquiry sent out by the National Safety Council to members of the delivery, taxicab, and bus section.

(1187)

HOW THE CROWE COMPANY REDUCED TRUCK ACCIDENTS. Safety Engin. 57: 212, 234, illus. 1929.

The company provided a bonus for drivers going a month without an accident. Bonus for the complete staff of drivers was provided if all drivers obeyed the rules. Employees were formed into a committee which did all the hiring and firing of drivers.

ANONYMOUS.

COMMERCIAL DRIVERS SETTING SAFETY PACE: ANALYSIS SHOWS THEIR FATALITIES ARE DECREASING; FIRST NO-ACCIDENT AWARDS GIVEN. Pub. Safety 5 (5): 4-5, illus. 1931.

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(1188)

EXHAUSTION EXACTS A TINY TOLL IN TRAFFIC: LESS THAN 1 PERCENT OF ACCI-DENTS IS TRACEABLE TO DRIVER FATIGUE BUT EMPLOYERS MUST SHOULDER RESPONSIBILITY. Com. Car Jour. 48 (6): 32-33, 35, 48-49, illus. 1935.

"This article reviews the findings of the National Safety Council's special investigation of driver fatigue as a cause of accidents."—p. 32.

(1190)

FLEET SAFETY PROGRAMS MUST INCLUDE PROPER MAINTENANCE. Com. Car Jour. 47 (1): 14-16. 1934.

Statements of L. T. White, Harold G. Hoffman, Albert C. Spottke, and Clinton Brettell at the Greater New York Safety Conference.

Carbon monoxide is cause of accidents; program for small fleet operators; accessories as accident hazards; commercial aspects of safety program.

(1191)

GETTING AND HOLDING DRIVERS' INTEREST. Pub. Safety 9 (5): 22-23; (6): 25-26, illus.; (7): 25-26, illus.; (8): 22, 25, 26, illus. 1935.

Series of articles published under following titles: Mock Trials Keep Up Drivers' Interest; "Milk Bottle" Safety Pool; "Play Up" the Safe Driver; Tests for Reaction Time.

(1192)

KNOW YOUR DRIVERS-KNOW YOUR EQUIPMENT!: AN INSTRUCTIVE MESSAGE ON MOTOR VEHICLE OPERATION AND SAFETY FROM ONE OF AMERICA'S LEADING MOTOR FLEET SUPERINTENDENTS. Power Wagon 56 (376): 10-12. 1936.

(1193)

MACY'S DEVELOPS PERMANENT STANDARDS FOR DRIVER SELECTION BY USING MEN-TAL ENGINEERING: HAVING SET UP THE STANDARDS, IT USES THEM AS A YARD-STICK TO MEASURE APPLICANTS AND PICK "IDEAL DRIVERS" FOR ITS 400-TRUCK FLEET. Com. Car Jour. 48 (6): 14-16, 78-79, illus. 1935.

(1194)

METROPOLITAN OPERATORS VIEW TRUCK PROBLEMS IN FRANK LIGHT. Com. Car Jour. 46 (3): 13-14. 1933.

How to reduce accidents by establishing safety committee. How to set up a safety committee. Should a driver be rewarded for safety or punished for accidents? At what speed should trucks be governed for operation in congested areas? Care of tires.

(1195)

A NATIONAL SURVEY AMONG TRUCK FLEETS ON SPOTTING DRIVERS REVEALS HOW OPERATORS CHECK CONDUCT: FLEETMEN REVEAL OWN INSPECTORS, CUSTOMERS, INSURANCE AGENTS AND POLICE ARE SOME OF THE SLEUTHS BEHIND "SPOOK RE-PORTS" ON DRIVERS. Com. Car Jour. 49 (3): 11-12, 46, illus. 1935. The national survey was conducted by the Commercial Car Journal.

(1196)

NEW SAFETY FILM FOR TRUCK DRIVERS: SAFETY ENGINEERING SPONSORS SOUND AND SILENT MOTION-PICTURE FILMS FOR USE IN CAMPAIGNS FOR STREET AND HIGHWAY ACCIDENT REDUCTION. Safety Engin. 72 (1): 13, illus. 1936.

(1197)

1073 FLEETS AVERAGE 2.78 ACCIDENTS PEB 100,000 MILES: ACCIDENT RATE FOR TRUCKS REDUCED 8 PERCENT DURING 1934-35, BUT RATE OF 3.34 STILL HIGH COMPARED WITH 2.66 FOR BUS FLEETS AND 1.53 FOR PASSENGER CAR DRIVERS. Power Wagon 57 (380): 23-24. 1936.

(1198)

A SAFETY PROGRAM THAT FITS SMALL FLEETS; TAILORED SO THAT IT DOESN'T COST A LOT OF JACK AND WON'T BALL UP DAILY FLEET ROUTINE. Com. Car Jour. 48 (2): 30-31, 48, 66-67. 1934.

"This plan was specially prepared by the National Safety Council at the request of the Commercial Car Journal".—p. 30.

A NONYMOUS.

SECRETS TO SAFETY IN FLEET OPERATION-REVEALED BY FLEETMEN AND SAFETY EXPERTS AT THE SIXTH ANNUAL GREATER NEW YORK SAFETY CONFERENCE. Comm. Car Jour. 49 (2): 26-28, 48, 1935.

Includes the following articles: Repair in Time, by Robert Clarke, pp. 26-27; Self-Insurance, by W. F. Banks, pp. 27-28; Right-of-way, by M. A. Dow, p. 28; Comfort and Safety, by D. C. Fenner, pp. 28, 48.

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225 000 ACCIDENT-FREE MILES: FLEET SAFETY WORK CONDUCTED INDEPENDENTLY OF THE PLANT PROGRAM RESULTS IN \$5,000 SAVED AND "NO-ACCIDENT DRIVER" AWARDS FOR 21 DRIVERS. Natl. Safety News 23 (6): 46, illus. 1931. Plan involves quarterly cash bonuses and safety awards.

YONKERS BONUS SYSTEM-AN ORIGINAL PLAN THAT HAS WORKED WONDERS IN ACCIDENT REDUCTION. Power Wagon 41 (287): 40-43, illus. 1928.

ALLEN. R. C.

(1202)

TO IMPROVE THE SAFETY RECORD CONCENTRATE ON DRIVERS WITH THE WORST AC-CIDENT RECORDS. Bus Transportation 10: 1-4, illus. 1931.

APPLEGREN, GEORGE,

(1203)

NOT FEWER ACCIDENTS BUT NO ACCIDENTS !: SECRET OF MOTOR EXPRESS, INC.'S. REMARKABLE ACCIDENT-FREE RECORD REVEALED BY PRESIDENT HERB HINCHLIFFE. Power Wagon 56 (375); 20-21, 1936.

(1204 - 1205)

WHAT CAN WE DO FOR HIGH-ACCIDENT DRIVERS? Natl. Safety News 25 (6): 19-20, 63-64, illus. 1932. Also in Pub. Safety 6 (6): 16-18, illus, 1932, under title "Study and Correct the High Accident Drivers."

Keeping men in condition is more difficult than maintaining vehicles. Companies which have given attention to human element have been well rewarded.

BALDWIN. H. E.

(1206)

89 PERCENT OF ACCIDENTS UP TO DRIVER: HOW WE KEEP DOWN OUR ACCIDENT RECORD BY EFFICIENT DRIVER SELECTION AND TRAINING METHODS COMBINED WITH BONUS AWARDS AND CONSTANT DRIVER SUPERVISION. Power wagon 46 (314): 54-56, illus. 1931.

Abstract of an address delivered before a meeting of the Furniture Warehouse Managers Association.

BANKS, W. F.

(1207)CENTRALIZED AUTHORITY ESSENTIAL TO FLEET SAFETY : SELF-INSURANCE PLAN BRINGS RESULTS IN REDUCTION OF ACCIDENT FREQUENCY AND ATTITUDE OF FLEET PERSONNEL. Power Wagon 54 (365): 5-11. 1935.

An address presented at the 6th Greater New York Safety Conference.

BARSANTEE, HARRY.

"KANGAROO COURT" SAVES THE DAY: DAIRY COMPANY DISCOVERS AN EFFECTIVE WEAPON AGAINST ACCIDENTS. Pub. Safety 6 (5): 16-17. 1932.

BLAKESLEE, H. N.

ACCIDENT PREVENTION ON OIL TRUCKS: ANALYSIS OF WHAT THE PETROLEUM INDUSTRY IS DOING TO REDUCE MOTOR VEHICLE ACCIDENTS. Power Wagon 57 (382); 7-8, 1936.

From a paper presented before the annual meeting of the National Petroleum Association, Titusville, Pa.

SAFETY ASPECTS OF THE MOTOR CARRIER ACT. Safety Engin. 71: 203-204. 1936.

Abstract of address before the 24th annual meeting of the Chamber of Commerce of the United States, Washington, D. C., April 29, 1936.

"The maximum of highway safety depends upon three principal factors, the proper condition of the vehicle, regulation of its use on the highways, and the competency and fitness of the driver. The Act covers all three of these factors."

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(1208)

BOND, E. J., JR.

BRETTELL CLINTON

MAINTENANCE MAKES IT FASIER FOR THE DRIVER Natl Safety News 30 (3, nt. 1): 25-26, 59, 1934.

Importance of commercial vehicle design and maintenance; mechanical construction of vehicle; steering gear; cab; accessories; devices that are not used: fire hazards; inspection methods.

BRIGGS G M

MILES PER ACCIDENT MARK THE SAFE BUS DRIVER. Natl. Safety News 22 (6): 27-29, illus. 1930.

Three steps in training Greyhound bus driver are essential to insure safe operation: the preliminary training in the training school, in the regional garages, and by supervisoral caution upon the highways.

BROWER, A. L.

SAFETY PAYS 300 PERCENT DIVIDEND. Safety Engin. 72 (6): 29-30, 1936.

Motor truck fleets; selling the safety idea; incentive for safety; certificates awarded; insurance rates and safety; exceptional safety dividends. (1214)

BROWN, WESLEY.

TRAFFIC OFFICER LOOKS AT THE DRIVER. Natl. Safety News 23 (3): 17-18. 1931.

Abstract of an address before the Fleet Supervisor's Division, Detroit Industrial Safety Council.

Too many drivers are more interested in the rear vision mirror than in the road ahead. Better understanding between the driver and traffic officer will improve the accident situation.

BULLOCK, E. W.

WHY TIRED DRIVERS HAVE ACCIDENTS. Pub. Safety 6 (6): 20, 28, 1932.

Abstract of address before 11th annual State safety conference held by the Massachusetts Safety Council and its cooperating organizations in Boston, April 20–21, 1932. Describes tragic mishaps caused by overworked and fatigued operators.

CAMERON, W. H.

ACCIDENT RECORDS: HOW THE AVERAGE FLEET OPERATOR CAN KEEP COMPLETE ACCIDENT STATISTICS AT LITTLE EXPENSE AND TIME. Power Wagon 42 (320): 18-23, illus, 1931.

Explains the system developed by the National Safety Council's Delivery. Taxicab and Bus Section.

CASHEL, S. J.

REDUCING TRUCKING COSTS IN AN 800-VEHICLE FLEET: HOW SAFETY AS A BUSI-NESS PROPOSITION NOT ONLY REDUCES ACCIDENT EXPENSE BUT, IMPROVES THE STANDARD OF OPERATING EFFICIENCY. Power Wagon 48 (331): 5-8. 1932. (1218)

TRUCKING COMPANY EVOLVES AN EFFECTIVE PLAN FOR THE PREVENTION OF TRAFFIC ACCIDENTS. Nation's Traffic 3 (3): 10-12, illus. 1929.

"By offering a bonus to each chauffeur going a year without a mishap, by spreading traffic safety propaganda and by re-enacting every collision with miniature vehicles. The Columbia Terminal Company reduced accidents from 818 in 1926 to 501 in 1927 and to 363 in 1928."

CATO, E. R.

HIGHWAY PATROL CHIEF DISCUSSES TRAFFIC SAFETY. Motor Carrier 13 (1): 9. 1934.

Question of long hours of steady driving is brought out.

CLAIR, ROBERT.

BEFORE HE HAS AN ACCIDENT-INSTRUCT HIM. Natl. Safety News 26 (2): 34. 36. 1932.

Sound training is more effective than either bribery or coercion in promoting safety among commercial vehicle operators. (1221)

DISCIPLINE, CASH BONUSES OR INSTRUCTION? Natl. Safety News 22 (1): 17-18, 90. 1930.

How safe driving can be sold to commercial operators on its own merits without hammer of discipline or cash bonus.

(1211)

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CONE, I. D. (1222) THIS FLEET REDUCED ACCIDENTS 90 PERCENT IN SEVEN YEARS: HOW THE SOUTH EXPRESS COMPANY, OPERATING 40 TRUCKS IN NEWSPAPER DELIVERY HAS MADE A NOTABLE RECORD IN ACCIDENT REDUCTION. Power Wagon 57 (381):
10–11, illus. 1936.
CORNELL, HERBERT. (1223) SIMPLE TESTS FOR COMMERCIAL DRIVERS. Natl. Safety News 31 (1): 27, 58-60. 1935.
Describes the tests devised by the City of Milwaukee when laboratory equipment was not available.
CRAIG, J. R. (1224) HOW TO TALK TO DRIVERS ABOUT TRAFFIC SAFETY. Safety Engin. 65: 165-166. 1933.
Paper read at the ninth annual Eastern Safety Conference in Newark, N. J., May 4, 1933.
Dow, M. A. (1225)
Ten commandments for safe driving recommended by National Association of Motor Bus Operators.
(1226) PREVENTING ACCIDENTS BY DRIVER SELECTION AND CAREFUL TRAINING. Power Wagon 51 (348): 29-31. 1933.
Types of men rejected and bonus and button awards are described.
(1227)
1933.
Excerpts from a recent address given before the American Transit Association.
Complete details concerning driver's training and supervision; "require- ments of a good driver.
ECKER, L. G. (1228) LET'S HAVE BETTER ROAD CONTROL OF TRUCK AND TRAILER TRAINS! SAFE OPERA- TION OF HIGH SPEED FREIGHT UNITS REQUIRES OBSERVANCE OF PROPER VEHICLE DISTANCES AND UTMOST DEFERENCE AND COURTESY TO ALL PASSING MOTORISTS. Power Wagon 48 (329): 5-6. 1932.
FAULKER, FRED. (1229) 12-FEATURE PLAN CONTROLS ACCIDENTS IN OUR 3,000 VEHICLE FLEET. Power Wagon 55 (371): 6-7. 1935.
Address presented before the American Trucking Association Convention
Teeth in plan are found in review board and application of driver penalties for preventable accidents.
FENNER, D. C. (1230)
COMFORT IN THE CAB. Natl. Safety News 31 (4): 21-22, illus. 1935. Ab- stract in Safety Engin. 69: 114-115. 1935.
Address delivered before the sixth annual Greater New York Safety Con- ference, held in New York City, March 1935.
Driving a motor vehicle should be comfortable enough to prevent physical weariness, but it should impose enough responsibility to prevent monotony and mental weariness.
GALLAGHER, D. J. (1231) HIGHER SPEEDS WITH SAFETY. Bus Transportation 8: 626, illus, 1929.
A coating of cinders on ice-coated highways will prevent busses from skidding.
Gates, A. S. (1232)
ASK CONNECTICUT IS BUS TRANSPORTATION SAFE TRANSPORTATION. Bus Trans- portation 14: 107-108, illus. 1935.
"Bus accidents have decreased 75 percent since 1927 despite the fact that bus mileage has nearly doubled during that time."

GERSTIN, STANLEY.

THE CCC A TRUCK DRIVER TRAINING SCHOOL: 2.175 WITH 24,000 TRUCKS ARE PROVING-GROUND FOR MEN AMBITIOUS TO BECOME DRIVERS. Com. Car Jour. 52 (2): 14-15, 61-62, 64, 66, 67, illus, 1936,

(1234)TRIAL BY JURY IN A COURT OF SAFETY: GIVING YOU AN EYE-WITNESS ACCOUNT OF THE WAY OPERATORS ARE USING THE JURY SYSTEM TO FIX ACCUENT RESPON-SIBILITY AND ADMINISTER JUSTICE. Com. Car. Jour. 49 (5): 30-32, 46, illus. 1935.

GORDON, M. A., and KING, J. D.

PLAY SAFE, DUTY DEMANDS IT. Bus Transportation 13: 442-443, 1934. The views presented are those of the man behind the wheel.

GRAHAM, E. J.

DRIVING ACCORDING TO HOYLE A BOOK OF RULES FOR DRIVERS OF AUTOMOTIVE VEHICLES TO PROMOTE SAFETY AND ECONOMICAL OPERATION. Com. Car Jour. 47 (3): 30-32, 36 illus, 1934.

GRAY. J. B.

(1237)

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(1236)

TRAFFIC "COURT" AS A FACTOR IN REDUCING ACCIDENTS : MINIATURE CITY ON TABLE TOP HELPS DRIVERS OF CONSOLIDATED GAS AND ELECTRIC COMPANY OF NEW YORK TO SEE THEIR MISTAKES. Power Wagon 44 (305): 9-12, illus. 1930.

GROSJEAN, C.

REDUCING ACCIDENTS TO ONE PER 14.021 MILES DRIVEN BY MEANS OF DRIVING TESTS, BONUSES, HONOR CERTIFICATES, SAFETY MEETINGS, AND PERSONAL WORK. DRIVING ACCIDENTS AT GIMBELS ARE COMING DOWN. Power Wagon 46 (315): 5-7. 1931.

GWYN, L. R., JR.

(1239)

(1240)

(1241)

SAFETY FACTORS IN FLEET OPERATION. Safety Engin. 72 (2): 71, 74. 1936. Address delivered to the All-Ohio Safety Congress, Columbus, June 21, 1936

Human equation: home accidents; mental attitudes and reports; equipment design.

HAROLD, E. L.

CAN MANAGEMENT CONTROL THE FLEET'S EXPERIENCE. Natl. Safety News 28 (1); 21–22. 1933.

Abstract of a paper presented before the ninth annual Eastern Safety Conference, Newark, N. J. Includes a systematic program, these savings are real, and needed legislation.

HARRISON, G. R.

DANGERS OF NIGHT DRIVING: WHAT CAN BE DONE TO REDUCE THEM: PAINTING OF TRUCKS WHITE FOR GREATER VISIBILITY AT NIGHT, USES OF REFLECTORS, AND OTHER CORRECTIVE MEASURES, DISCUSSED BY IOWA TBUCK MEN. POWER Wagon 40 (277): 10-11. 1928.

HENZLER. A. O., BURK, W. F., and HAMMERMANN, JOHN, JE. (1242)FLEET FORMULAS FOR PROMOTING SAFE OPERATION. Com. Car Jour. 49 (4): 32-34, 58, illus. 1935.

HIBBS, BEN.

(1243)SO YOU HATE TRUCK DRIVERS : THEY'RE EGGS, YES, BUT MIGHTY GOOD ONES, AND HERE'S WHY. Power Wagon 52 (852): 34-40. 1934.

Reprinted from the Country Gentleman. The author went voyaging on several big motor carriers and brought back some convictions about truck drivers and accidents.

HORBOCKS, T. A.

(1244)

REWARD FOR SAFE DRIVING. Natl. Safety News 23 (5): 27-28, illus. 1931. Award for commercial drivers who can qualify with accident-free year was created by the National Safety Council.

(1233)

HOWARD, R. H.

 $\begin{array}{c} (1245)\\ \text{ACCIDENT COSTS.} & \text{Power Wagon 53} (358): 18-20, 22; (359): 24-26. \\ 1934; \\ 54 (361): 8-11; (362): 16-18; (363): 14-16, 18; (364): 10-12, 14; (366): \\ 38-40, 42; 55 (367): 20-23; (369): 34-36; (370): 34-37; (372): 34-37, \\ 1935; 56 (374): 46-48, 1936. \end{array}$

Series of articles discussing problems and methods in the control of costs Series of articles discussing problems and methods in the control of costs of fleet accidents, as follows: 1, When, Where, and How Truck Accidents Occur; 2, Mechanical Defects as Cause of Accidents; 3, Detecting and Help-ing "Accident-Prone Drivers"; 4, Accidents Due to Physical Condition of Driver; 5, Drivers Should Know "Rules of the Road"; 6, Finding the Causes of Accidents; 7, The Control of Trailer Hazards; 8, Management Responsibility for Accidents; 9, Awards and Penalties to Promote Safety; 10, Direct and Indirect Costs of Accidents; 11, Fleet Safety Contests to Control Accidents: 12. Speed as a Cause of Accidents.

HUGGINS, A. M.

PREVENTING HIGHWAY ACCIDENTS. Safety Engin. 71: 257. 1936.

Abstract of an address delivered to the State-wide Industrial Safety Conference, Charlotte, N. C., May 15, 1936.

What truck and hus drivers should know and do.

HUGUELET. G. A.

(1247)

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(1245)

SYSTEM IN MOTOR BUS OPERATION: HOW IT WAS APPLIED IN ORGANIZING A SAFETY DEPARTMENT THAT HAS RADICALLY REDUCED ACCIDENTS. Bus Transportation 7: 429-430, illus. 1928.

HUSSON, JOSEPH.

1927 ACCIDENT REPORT OF 3 N. Y. FLEETS OPERATING 825 TRUCKS DAILY: THIS SUMMARY OF FACTS PREPARED FOR THE METROPOLITAN GROUP OF THE RETAIL DELIVERY ASSOCIATION OFFERS SOME PERTINENT SUGGESTIONS ON ACCIDENT PREVENTION. Power Wagon 40 (280): 54-55, 1928.

JENSEN, HOLGER.

SAFETY IN AUTOMOBILE FLEET OPERATION. Safety Engin. 57: 259-261, illus. 1929.

"The Safety man's problem is to bring to the truck drivers a sense of responsibility and ownership of the machines they drive."

JONES, SPENCER.

SAFETY HINGES ON THE GRUB THE DRIVERS GRAB. Com. Car Jour. 41 (5): 21, 58, 60, illus, 1936,

Interview with Dr. E. A. Flynn, chief, department of gastroenterology, St. Michael's Hospital, Newark, N. J.

KINNEY, D. F.

LIFE MAY BEGIN AT 40, BUT-SAFE DRIVERS ARE "SETTLED" AT 35 ... SAYS THIS DENVER OPERATOR WHOSE FLEET HAS HAD BUT ONE ACCIDENT IN 475,000 MILES. Com. Car Jour. 48 (6): 18-19, 80-81, illus. 1935.

LOOMIS. T. J.

SAFETY IN LARGE FLEETS. Pub. Safety 9 (3): 26, 28, 32. 1935. Excerpts from a recent address given over Station WICC, New Haven,

Conn.

Proper equipment; personnel and its important relation to safety; conditions.

LUNDSTEADT, A. E.

SPIRIT OF SAFETY GROWS AND HELPS LOWER FLEET ACCIDENT BATE 37 PERCENT. Com. Car. Jour. 46 (4): 15-16. 1933.

Table, p. 16, shows vocational analysis of commercial accident rates July 1932 to June 1933.

MCCRACKEN, DWIGHT.

TRIP SHEETS DO NOT TELL ALL. Pub. Safety 11 (6): 34, 36, 38, illus. 1936.

There has developed a need for supplementary automatic control and recording devices, for there is nothing in the trip sheet to show the speed at which the driver operates at any particular moment.

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MANUEL, L. E.

(1255)

KEEP THE SAFETY CAMPAIGN ALIVE. Bus Transportation 11: 350-352. 1932. Accident prevention policies and safety campaigns of United Motor Coach Co., Des Plaines, Ill.

METROPOLITAN LIFE INSURANCE Co., POLICYHOLDERS SERVICE BUREAU. (1256) PREVENTING COMMERCIAL VEHICLE ACCIDENTS. 12 pp., illus. New York. 1929. The problem; requirements of management; "no accident" bonus; educational safety program; typical talk to drivers.

MINEUR, H. J.

DRIVER MUST REALIZE HIS RESPONSIBILITIES. Natl. Safety News 21 (4): 34, 36, 82-83. 1930.

Address delivered before the first annual Greater New York Safety Conference.

Responsibility rating plan is one of most effective methods used by the Borden Co. in producing safer vehicle operation.

NATIONAL ASSOCIATION OF MOTOR BUS OPERATORS, SAFETY COMMITTEE. (1258) MINUTES IN BRIEF OF THE MEETING OF THE SAFETY COMMITTEE OF THE NATIONAL ASSOCIATION OF MOTOR BUS OPERATORS, HOTEL STATLER, CLEVELAND, OHIO, MAY 9,1935. 6 pp. [Washington, D. C.] 1935.

Safety commandments for motor vehicle operators recommended by the safety committee, p. 6.

NATIONAL HIGHWAY USERS CONFERENCE.

SUMMARY OF STATE LAWS AND COMMISSION REGULATIONS OF HOURS OF SERVICE OF MOTOR VEHICLE OPERATORS OF BUSES AND TRUCKS. 5 pp. Washington, D. C. September 1, 1933. [Mimeographed.]

NATIONAL RESEARCH COUNCIL. COMMITTEE ON THE PSYCHOLOGY OF THE HIGHWAY. (1260)

REDUCING ACCIDENTS IN COMMERCIAL DRIVING; REPORT OF A STUDY ... 11 pp. [Washington.] 1934? [Mimeographed.]

NATIONAL SAFETY COUNCIL, INC.

SELECTING DRIVERS FOR COMMERCIAL VEHICLES. Natl. Safety News 22 (2): 27-30, 72, illus. 1930.

This is No. D2 of the series of Safe Practices pamphlets.

O'BRIEN, NEIL.

(1262)

(1261)

(1259)

HERE ARE FIVE REGULATIONS THAT REDUCE OUR ACCIDENTS TO A MINIMUM. Power Wagon 42 (289): 26-27, illus. 1929.

O'GARA, J. E.

(1263)

HOW MACY'S CUT THE COST OF ACCIDENTS—PRINCIPLES UNDERLYING A SAFETY PROGRAM WHICH IN LESS THAN 10 YEARS REDUCED ACCIDENTS FROM ONE EVERY 3,000 MILES TO ONE EVERY 54,054 MILES, AND SAVED \$40,000 PER YEAR IN IN-SURANCE PREMIUMS. Power Wagon 57 (379): 5-7. 1936.

Reprint from Executive Service Bulletin, Metropolitan Life Insurance Co.

(1264)

NON-ACCIDENT PLAN SETS LOW MARK FOR MACY'S 220 TRUCK FLEET: HOW A STEADY DROP IN ACCIDENTS FOLLOWS REPLACEMENT OF AUTOMATIC SALARY AD-VANCE AND BONUS PLAN WITH "CONSTANTLY-SAFE, MORE-PAY" DRIVING PLAN. Power Wagon 40 (281): 20-24, illus. 1928.

Paper presented before the retail delivery association of the annual convention of the National Retail Dry Goods Association.

ORR, J. M.

(1265)

ANALYSIS OF ACCIDENT CONTROL IN FLEET OPERATION. JOUR. Soc. Automotive Engin. 36: 23-35, illus. 1935.

Accident facts and costs; selected quotations from representative fleet operators and other authorities regarding operating practices, relations with general public, accident control, etc. Concludes that driver is most important factor in accident prevention. Cost of adequate accident-prevention activities is negligible portion of operating expense.

(1257)

(1266)ROONEY, C. A. PLAN FOR SAFETY. Bus Transportation 15 (1): 8, 1936. Only by planned operation can an effective program be initiated. (1267)ROSENBARGER C. C. WHEN YOU MEET A TRUCK. Natl. Safety News 30 (2): 12, 59, illus. 1934. Passing a truck on the road isn't the ordeal some people think. Here are a few safety pointers for the pleasure car driver to remember. (1268)RUTH. C. H. ABOUT DRIVERS AND DRIVING. Pub. Safety 9 (6): 22-24; (7): 22-23. 1935. Explains the four levels of mental reactions and their direct connection with good driving. (1269)NEWSPAPER DISCOVERS ACCIDENTS COST MONEY AND THAT ACCIDENTS ARE NEED-LESS; THEREFORE THIS MONEY CAN BE SAVED. Pub. Safety 6 (7): 16-18. illus. 1932. Washington Star conducts educational program. (1270)SAFETY DRIVING PAYS A CASH DIVIDEND. Natl. Safety News 26 (1): 27-29, illus. 1932.Newspaper fleet reduced its accident costs 80 percent in 1 year by systematic efforts; dividends paid on safety work. (1271)SCHNEIDER, C. L. FOR SAFE AND SANE TRAILER OPERATION : RIGID OBSERVANCE OF SAFE DRIVING CODE FOR TRAILER TRAINS IS A VITAL NEED IN COUNTERACTING ADVERSE LEGISLATIVE PROPOSALS, Power Wagon 44 (306): 36-38, 1930. SCOBIE, VERNON. (1272)TO THE MAN BEHIND THE MAN BEHIND THE WHEEL. Bus Transportation 13: 284-285, 339-340. 1934. A series of safety talks directed to the management. Series [2], pp. 339-340, has the title "Accident Reduction a Problem With Many Angles." (1273)TO THE MEN AT THE WHEEL. BUS Transportation 13: 90-91, 124-125. illus. 165. 1934. A series of three safety talks to the driver: 1. A Number of Apparently Innocent Hazards Are Discussed; 2, Hazards of Night Driving; 3, Drowsing, Dragging, and Drinking. SCOTT, J. V. (1274)NEW QUOTA FOR THE SALESMAN. Natl. Safety News 27 (4): 25-26, illus, 1933. In the past the only qualification expected of the salesman was ability to sell. Now his company is also demanding that he operate his car without endangering the public. SHAPIRO, ALEXANDER. (1275)ACCIDENTS HIT A NEW LOW: DRIVER CONTROL IS THE ANSWER. BUS TRANSPORtation 14: 364-366, illus. 1935. Accident prevention as carried on by the Washington Rapid Transit Co. SLOCOMBE, C. S. (1276)CUTTING ACCIDENT COSTS. Bus Transportation 11: 169-170. 1932. Treat each driver's own troubles individually. Mass methods alone are not enough. Concentrate the personal work on accident repeaters. (1277)PLAY SAFE, COMMON SENSE DEMANDS IT. Bus Transportation 13: 441-442. 1934. "Find out why each man has his accidents, and the way to cure him will immediately appear."

SMITH, W. S.

DEVELOPING THE DRIVER'S PRIDE. Natl. Safety News 25 (4): 12. 1932. Abstract of an address before the Fleet Supervisor's Division, Detroit Industrial Safety Council.

Driver has pride in his part in campaign and in plate on his truck showing his company is member of organization seeking to prevent accidents.

Society of Automotive Engineers, Operation and Maintenance Committee, Subcommittee No. 5. (1279)

DRIVERS AND SAFETY MEASURES: SELECTION, TRAINING, AND PAYMENT OF MEN, AND SAFE OPERATING METHODS STUDIED. JOUR. Soc. Automotive Engin. 24: 199-204. 1929.

Reported upon by Ethelbert Favary, chairman of the subcommittee, at the transportation meeting held in Newark, N. J., October 18, 1928.

SPEIR, M. B., JR.

COMMERCIAL DRIVER. Safety Engin. 69: 264-266. 1935.

Address delivered before the sixth annual State-wide Industrial Safety Conference, Durham, N. C., May 9, 1935.

What does the company expect of the driver? What does the commercial driver expect of the bus company? What does the public expect of the driver? What does the driver expect of the public?

STROMBERG, A. W.

DRIVING TACTICS: IMPORTANCE OF EXEMPLARY DRIVING IN RELATION TO MOTOR TRUCK SAFETY AND LEGISLATION: STANDARDS FOR TRUCK DRIVING ARE ESTAB-LISHED BY OUR MAJOR COMMERCIAL VEHICLE FLEETS. Power Wagon 49 (336): 18-21. 1932.

Talk given before the Fleet Supervisors Association of Chicago, on October 12, 1932.

TUFTS, WARNER.

MOTOR BUS-OUR SAFEST HIGHWAY VEHICLE. Bus Transportation 8: 373-374, illus. 1929.

Statistics of motor-bus accidents recorded in eight States and the District of Columbia in 1928 are given and discussed, also psychological reasons for fear of bus.

VAN NESS, R. H.

ICE-COMPANY DRIVER-PRACTICE. Jour. Soc. Automotive Engin. 28: 691-692. 1931.

Outlines how drivers can operate heavy ice-delivery motor trucks safely.

WELLS, C. V.

WHEN THE FLEET IS SCATTERED: SUPERVISING THE DRIVERS OF A SCATTERED FLEET IS DIFFICULT BUT MEN WILL RESPOND TO A DEFINITE AND CONSTRUCTIVE PROGRAM EVEN WHEN OPERATING FAR FROM THE HEAD OFFICE. Natl. Safety News 27 (2): 13-14. 1933.

WILLIAMS, S. J.

(1285)

(1284)

EVERYONE WINS! WHEN THEY PLAY THE GAME OF SAFETY: HERE IS A PRACTICAL SAFETY PROGRAM FOR THE MOTOR CARRIER. Bus Transportation 15 (1): 4-5, illus. 1936.

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(1287)

A PRACTICAL SAFETY PROGRAM FOR THE TRUCK OPERATOR. Power Wagon 53 (359): 5-7. 1934.

Address before the annual meeting of the American Truck Association, Inc., Chicago, October 22, 1934.

WINCHESTER, J. F.

SELECTING AND TRAINING MOTOR VEHICLE OPERATORS. Natl. Petroleum News 27 (26): 56, 60-61, 1935.

Paper given at a safety meeting of the Philadelphia Chamber of Commerce.

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WOOD, B. C.

MARING THE BUS A SAFE NEIGHBOR ON THE HIGHWAY. Natl. Safety News 20 (4): 87-88, 126, illus, 1929.

The bus requires greater care in operation than does the street car, but it can be made equally safe for passengers and for other vehicles on the highway.

WORLEY, J. S.

(1289)

TRUCKING TRUTHS: IMPORTANT STATISTICAL FACTS AND DATA UNCOVERED IN SUBVEY OF TRUCK TRANSPORTATION IN MICHIGAN. Power Wagon 55 (369): 16-20, 22-23; (370): 38-41, 1935.

Pt. I, Extent, Economic Value, and Taxation of Truck Transportation in Michigan; pt. 2, Regulation and Safety Factors.

MOTOR-VEHICLE INSURANCE

ANONYMOUS.

ACCIDENT EXPERIENCE IN MASSACHUSETTS REVIEWED. Natl. Underwriter 34 (19): 33. 1930.

Reviews accidents during the 3 full years of compulsory automobile liability insurance. Fatal accidents were fewer, but others increased.

(1291)

(1290)

AUTOMOBILE LIABILITY POLICY EXCLUSIONS: STANDARDIZATION OF INSURANCE CONTRACTS NEEDED TO PROMOTE PUBLIC UNDERSTANDING OF COVERAGE. JOUR. Amer. Ins. 9 (2): 9-12, illus. 1932.

The insuring clause; standard exclusions; carrying passengers for hire; age of driver; trailer exclusion; property damage exclusions; warranties for exclusions; additional exclusions.

(1292)

COMPULSORY INSURANCE REQUIREMENTS. Bus Transportation 10: 179. 1931. Table shows by States, personal-liability- and property-damage-insurance requirements for bus companies operating under State regulation.

(1293)

FINANCIAL RESPONSIBILITY LAW. W. Va. Highways 1 (5): 7, 31. 1935.

(1294)

FINANCIAL RESPONSIBILITY BILL. Highway Transportation 18 (11): 5-7, 18. 1929.

Analysis and text of New York law effective September 1, 1929, providing that operator's or chauffeur's license and all motor-vehicle certificates be suspended upon conviction of certain offenses. Editorial in Highway Transportation 19 (3): 13-15, 1929, covers salient features of financial responsibility law. A list of questions and answers which explain various phases of the statute, compiled by the State Motor Vehicle Bureau, is in Highway Transportation 19 (4): 5-6, 19. 1929.

(1295)

GUEST SUIT LAWS NOW PROTECT DRIVERS IN TWENTY-SIX STATES: OPERATOR NO LONGER LIABLE FOR UNLIMITED DAMAGES. Automobile Daily News 11 (2328): 22. 1936.

(1296)

HIT AND PAY—A SURVEY OF LIABILITY LAWS: FINANCIAL RESPONSIBILITY AND INSURANCE LEGISLATION SOUND IF IT FOLLOWS DRIVERS' LICENSE CODES. Pub. Safety 5 (6): 32. 1931.

Summarizes results of survey made by the Christian Science Monitor.

(1297)

MASSACHUSEITS COMPULSORY INSURANCE: PEOPLE OF MASSACHUSEITS MUST CHOOSE BETWEEN NO COMPULSION PROTECTION AND HIGH RATES. Automobilist 16 (1): 5, 10. 1932.

Compulsory law reviewed; fraudulent claims and excessive verdicts: rate-making fair.

(1298)

MOTOR VEHICLE LIABILITY IN OHIO. Police Jour. 22 (1): 16-18. 1935. Motor-vehicle liability became effective in Ohio on October 1, 1935.

(1288)

ANONYMOUS.

NEW HAMPSHIRE AUTOMOBILE FUND BILL DECLARED VOID BY SUPREME COURT. Jour. Amer. Ins. 12 (5): 23-25. 1935.

"This bill, Senate 37, would have created a State adjustment commission to investigate motor vehicle accidents and to determine liability and make awards which can be given the effect of judgments."—p. 23.

- (1300) NEW HAMPSHIRE LAW ACCIDENT PREVENTIVE: WITHHOLDING OF APPLICABILITY OF LAW UNTIL AFTER MISHAP INSURES CAUTION. Automotive Indus. 59: 463, 1928.
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AUTOMATIC COMPENSATION FOR AUTOMOBILE ACCIDENT VICTIMS. 7 pp. New York. 1928.

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COMPENSATION FOR AUTOMOBILE ACCIDENTS. 27 pp. New York. P. Tecumseh Sherman, 15 William St. [1928.]

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Beuthel, Walter263, 264, 1031, 1032, Bickell, J. P263, 266, 267, 268, 117, 207, 265, 266, 267, 268, 463, 1033, 1034. Bingham, W. V Biscaluz, E. W Biakelke, B. W Black, B. W Black, B. W Blacke, C. W Blacke, H. N Blackelee, H. N Blacknad, A. H Bootler, C. F Bodcker, W. H Bodcker, W. H Bordes, von	$\begin{array}{c} 7755\\ 7775\\ 13111\\ 116,\\ 444,\\ 1112\\ 1200\\ 630\\ 1229\\ 870\\ 1229\\ 870\\ 1220\\ 870\\ 1210\\ 6631\\ 2669\\ 871\\ 1210\\ 871\\ 1210\\ 871\\ 1210\\ 871\\ 1210\\ 871\\ 1210\\ 871\\ 1210\\ 8864\\ 2708\\ 632\\ 8864\\ 2708\\ 632\\ 8864\\ 2708\\ 632\\ 8864\\ 2708\\ 632\\ 8864\\ 2708\\ 632\\ 8864\\ 2121\\ 1212\\ 1$
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Beuthel, Walter263, 264, 1031, 1032, Bickell, J. P263, 264, 1031, 1032, 117, 207, 265, 266, 267, 268, 463, 1033, 1034, Bingham, W. V118, 119, Biscaluz, E. W118, 119, Biack, B. W118, 119, Biack, L. W118, 119, Bianchard, A. H118, 119, Bianchard, R. W118, 119, Biack, S. W. H118, 119, Bodeker, C. F118, 119, Bodekler, C. F118, 119, Border, C. F118, 119, Bowen, E. L118, 119, Bowen, I. R118, 119, Bowen, I. R118, 119, Bowen, I. R118, 119, Bowen, I. R	$\begin{array}{c} 7755\\ 7775\\ 13111\\ 116,\\ 444,\\ 1112\\ 1200\\ 6300\\ 1209\\ 8700\\ 1209\\ 8700\\ 1209\\ 1200\\ 8700\\ 1210\\ 1200\\ 6312\\ 2870\\ 1210\\ 6312\\ 2777\\ 8711\\ 1212\\ 1210\\ 632\\ 2028\\ 872\\ 634\\ 270\\ 638\\ 638\\ 638\\ 628\\ 872\\ 638\\ 638\\ 638\\ 628\\ 872\\ 638\\ 638\\ 638\\ 638\\ 638\\ 638\\ 638\\ 638$
Benthel, Walter263, 264, 1031, 1032, Bickell, J. P263, 266, 267, 268, 463, 1033, 1034. Bingham, W. V133, 1034. Bingham, W. V118, 119, Biscailuz, E. W Bisky, J. S Black, B. W Black, L. W Black, L. W Blacksee, H. N. Blacksee, H. N. Blackhall, J. R. Blacksee, H. N. Border, C. F- Bond, E. J., Jr_ Borters, von	$\begin{array}{c} 7755\\ 1311\\ 116,\\ 444,\\ 1112\\ 120\\ 630\\ 122\\ 870\\ 122\\ 870\\ 1220\\ 870\\ 1220\\ 870\\ 1220\\ 870\\ 1220\\ 877\\ 1220\\ 877\\ 1210\\ 871\\ 1213\\ 864\\ 872\\ 270\\ 633\\ 864\\ 270\\ 633\\ 864\\ 270\\ 633\\ 872\\ 270\\ 633\\ 864\\ 1211\\ 1315\\ 873\\ 1213\\ 873\\ 1213\\ 457\\ 873\\ 1213\\ 873\\ 1213\\ 873\\ 1213\\ 873\\ 1213\\ 873\\ 1213\\ 873\\ 1213\\ 873\\ 1213\\ 873\\ 1213\\ 12$

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Brown, E. G	1089
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Diowil, H. D. 1000	1316
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Carruthers, A. C 229, 277.	1145
Carruthers, A. C 229, 277, Cashel S J	$\frac{1145}{1218}$
Carruthers, A. C	$1145 \\ 1218 \\ 620$
Carruthers, A. C 229, 277, Cashel, S. J 1217, Cassinone	$1145 \\ 1218 \\ 639 \\ 1010$
Carruthers, A. C229, 277, Cashel, S. J1217, Cassinone 1217, Cassinone Cato, E. R186, 186,	$\begin{array}{r} 1145 \\ 1218 \\ 639 \\ 1219 \end{array}$
Čarruthers, A. C	$1145 \\1218 \\639 \\1219 \\187$
Carruthers, A. C 229, 277, Cashel, S. J 1217, Cassinone Cato, E. R 186, Cavanagh, R. F 186, Chamber of Commerce of the United	$1145 \\ 1218 \\ 639 \\ 1219 \\ 187$
Carruthers, A. C. 229,277, Cashel, S. J. 229,277, Cassinone 1217, Catsinone 1217, Cator E. R. Cavanagh, R. F. 186, Chamber of Commerce of the United States States Insurance Advisory Com-	$1145 \\1218 \\639 \\1219 \\187$
Carruthers, A. C 229, 277, Cashel, S. J 1217, Cassinone Cato, E. R 186, Cavanagh, R. F 186, Chamber of Commerce of the United States, Insurance Advisory Com- mittee	1145 1218 639 1219 187
Čarruthers, A. C. 229, 277, Cashel, S. J. 217, Cassinone 21217, Cavanagh, R. F. 186, Cavanagh, R. F. 186, Chamber of Commerce of the United States, Insurance Advisory Com- mittee	1145 1218 639 1219 187 1318
Čarruthers, A. C229, 277, Cashel, S. J1217, Cassinone Cassinone Cato, E. R Cavanagh, R. F Chamber of Commerce of the United States, Insurance Advisory Com- mittee Charles, Don	$1145 \\ 1218 \\ 639 \\ 1219 \\ 187 \\ 1318 \\ 124$
Carruthers, A. C229, 277, Cashel, S. J1217, Cassinone 229, 277, 1217, Cassinone Caton E. R 186, Cavanagh, R. F Chamber of Commerce of the United States, Insurance Advisory Com- mittee Charles, Don Council	$1145 \\ 1218 \\ 639 \\ 1219 \\ 187 \\ 1318 \\ 124 \\ 1035 \\ 1219 \\ 187 \\ 124 \\ 1035 \\ 121 \\ 101$
Carruthers, A. C229, 277, Cashel, S. J1217, Cassinone Cassinone Cato, E. R186, Cavanagh, R. F186, Cavanagh, R. F186, Chamber of Commerce of the United States, Insurance Advisory Com- mittee Charles, Don Charles, Don Chicago City Council Childs J. W	$1145 \\ 1218 \\ 639 \\ 1219 \\ 187 \\ 1318 \\ 124 \\ 1035 \\ 907 \\ 907 \\$
Carruthers, A. C. 229, 277, Cashel, S. J. Cashel, S. J. 1217, Cashone Catonone 1217, Cashel, S. J. Catonagh, R. F. 186, Cavanagh, R. F. Chamber of Commerce of the United States, Insurance Advisory Committee 186, Commerce Charles, Construction Charles, Don Chicago City Council Childs, J. W. D	$1145 \\ 1218 \\ 639 \\ 1219 \\ 187 \\ 1318 \\ 124 \\ 1035 \\ 907 \\ 195 \\$
Carruthers, A. C229, 277, Cassinone Cassinone Cato, E. R. Cavanagh, R. F Chamber of Commerce of the United States, Insurance Advisory Com- mittee Charles, Don Chicago City Council Childs, J. W Chrysler, W. P	$1145 \\ 1218 \\ 639 \\ 1219 \\ 187 \\ 1318 \\ 124 \\ 1035 \\ 907 \\ 125 \\$
Čarruthers, A. C. 229, 277, Cashel, S. J. 1217, Cassinone 1217, Catonone 186, Catonone 186, Catonone 186, Chamber of Commerce of the United States, 186, States, Insurance Advisory Committee 186, Charles, Don 186, Chicago City Council 116, Childs, J. W. 116, Clair, Robert 1220,	$\begin{array}{c} 1145\\ 1218\\ 639\\ 1219\\ 187\\ 1318\\ 124\\ 1035\\ 907\\ 125\\ 1221\\ \end{array}$
Čarruthers, A. C229, 277, Cassinone 229, 277, 1217, Cassinone Cassinone 1217, Cassinone Cato, E. R 186, Cavanagh, R. F Chamber of Commerce of the United States, Insurance Advisory Com- mittee Charles, Don Commerce Charles, Don Childs, J. W Childs, J. W Childs, J. W Chrysler, W. P Clair, Robert Coburn, R. W 220, 200, 200, 200, 200, 200, 200, 200,	$1145 \\ 1218 \\ 639 \\ 1219 \\ 187 \\ 1318 \\ 124 \\ 1035 \\ 907 \\ 125 \\ 1221 \\ 640 \\ \\ \end{array}$
Carruthers, A. C. 229, 277, Cashel, S. J. 1217, Cassinone 1217, Cassinone 186, Cato, E. R. 186, Cavanagh, R. F. 186, Chamber of Commerce of the United States, Insurance Advisory Committee 186, Charles, Don Chicago City Council Childs, J. W. Chicago City Council Clair, Robert. 1220, Coburn, R. W. 220, Consultant 1220,	$1145 \\ 1218 \\ 639 \\ 1219 \\ 187 \\ 1318 \\ 124 \\ 1035 \\ 907 \\ 125 \\ 1221 \\ 640 \\ 1151 \\ 125 \\ 1251 \\ $
Carruthers, A. C. 229,277, Cashel, S. J. 1217, Cassinone 1217, Cassinone 186, Cator 186, Cator 186, Cator 186, Chamber of Commerce of the United 186, States, Insurance Advisory Committee 186, Chargo City Council 186, Chirdgo City Council 1120, Chirdgo City Council 1220, Chirdge, W. P 1220, Coburn, R. W 200, Coburn, R. W 200, Coburn, R. W 200, Coburn, A. P 200,	$\begin{array}{c} 1145\\ 1218\\ 639\\ 1219\\ 187\\ 1318\\ 124\\ 1035\\ 907\\ 125\\ 1221\\ 640\\ 1151\\ \end{array}$
Carruthers, A. C. 229, 277, Cashel, S. J. 1217, Cassinone 1217, Casinone 186, Cato, E. R. 186, Cavanagh, R. F. 186, Chamber of Commerce of the United States, Insurance Advisory Committee Charles, Don 1217, Chicago City Council 1217, Childs, J. W. 1217, Childs, J. W. 1220, Coburn, R. W. 1220, Cohen, A. B. 830,	$\begin{array}{c} 1145\\ 1218\\ 639\\ 1219\\ 187\\ 1318\\ 124\\ 1035\\ 907\\ 125\\ 1221\\ 640\\ 1151\\ 931\\ 0, 831\\ 0, 831\\ \end{array}$
Carruthers, A. C. 229,277, Cashel, S. J. 1217, Cassinone 1217, Cassinone 186, Caton B. R. 186, Chamber of Commerce of the United 186, States, Insurance Advisory Committee 186, Charles, Don 180, Chicago City Council 110, Childs, J. W. 1220, Colar, Robert 1220, Coburn, R. W. 1220, Cohen, A. B 830, Cole, William 830,	$\begin{array}{c} 1145\\ 1218\\ 639\\ 1219\\ 187\\ 1318\\ 124\\ 1035\\ 907\\ 1225\\ 1225\\ 1225\\ 1225\\ 1225\\ 1225\\ 1225\\ 1225\\ 1225\\ 1225\\ 1225\\ 1225\\ 1225\\ 1278\\ 831\\ 278\\ \end{array}$
Carruthers, A. C. 229,277, Cashel, S. J. 1217, Cassinone 1217, Cassinone 186, Caton E. R. 186, Chamber of Commerce of the United 186, Chamber of Commerce of the United 186, Charles, Insurance Advisory Committee 1217, Chicago City Council 1217, Chirdso City Council 1210, Chysler, W. P. 1220, Coburn, R. W 1220, Cohen, A. B 830, Cole, William 630, Committee to Study Compensation for 1220,	$\begin{array}{c} 1145\\ 1218\\ 639\\ 1219\\ 187\\ 1318\\ 124\\ 1035\\ 907\\ 125\\ 1221\\ 640\\ 1151\\ , 831\\ 278\\ \end{array}$
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Carruthers, A. C. 229,277, Cashel, S. J. 1217, Cassinone 1217, Cassinone 186, Caton E. R. 186, Chamber of Commerce of the United 186, Chamber of Commerce of the United 186, Charles, Insurance Advisory Committee 186, Chicago City Council 1220, Chysler, W. P. 1220, Coburn, R. W. 1220, Coben, A. B. 830, Cole, William 60, Committee to Study Compensation for Automobile Accidents. Commonwealth Club of California, 1102. 1102,	$\begin{array}{c} 1145\\ 1218\\ 639\\ 1219\\ 187\\ 1318\\ 124\\ 1035\\ 907\\ 125\\ 1221\\ 640\\ 1151\\ 9,831\\ 278\\ 1319\\ 1320\\ \end{array}$
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Carruthers, A. C. 229,277, Cashel, S. J. 1217, Cassinone 1217, Cassinone 186, Caton E. R. 186, Chamber of Commerce of the United 186, Chamber of Commerce of the United 186, Charles, Don 186, Chicago City Council 1220, Chysler, W. P. 1220, Coben, R. W 1220, Cohen, A. B. 830 Cole, William 604, Commonwealth Club of California. 1102, Conce, I. D. 1102, Conce, I. D. 1102,	$\begin{array}{c} 1145\\ 1218\\ 639\\ 1219\\ 187\\ 1318\\ 124\\ 1035\\ 907\\ 125\\ 1221\\ 640\\ 1151\\ 278\\ 1319\\ 1320\\ 1222\\ \end{array}$
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Hall, L. M	1040
Halsey M N	231
999 999 909 657 659 794	1011
202, 200, 090, 001, 000, 184,	T041
1071, 1106, 1163.	
Halvorson C A B In	1164
Halvoisoli, C. A. D., JI	1104
Hamin, G. E	136
Hamilton, J. R	137
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Hemmonn John In	10/0
Hammermann, John, Jr	1242
Hammermann, John, Jr Hammond, H. F	$1242 \\ 448$
Hammermann, John, Jr Hammond, H. F Hanna W E 1107 1108	$1242 \\ 448 \\ 1334$
Hammermann, John, Jr Hammond, H. F Hanna, W. E 1107, 1108	$1242 \\ 448 \\ 1334 \\ 012 \\ 01$
Hammermann, John, Jr Hammond, H. F 1107, 1108 Hanna, W. E 1107, 1108 Hanson, J. W	$1242 \\ 448 \\ 1334 \\ 213 \\ 213 \\ 124 \\ 213 \\ 124 \\ 213 \\ 124 \\ 12$
Hammermann, John, Jr Hammond, H. F 1107, 1108 Hanson, J. W 1107, 1108 Harnett, C. A 1109	$1242 \\ 448 \\ , 1334 \\ 213 \\ , 1335 \\$
Hammermann, John, Jr Hammond, H. F Hanna, W. E Hanson, J. W Harnett, C. A Harnett, E. I.	$1242 \\ 448 \\ , 1334 \\ 213 \\ , 1335 \\ 1240 $
Hammermann, John, Jr Hammond, H. F Hannon, W. E Hanson, J. W Harnett, C. A Harnett, C. A Harnett, C. A Harnett, C. A	$1242 \\ 448 \\ , 1334 \\ 213 \\ , 1335 \\ 1240 \\ 25$
Hammermann, John, Jr Hammond, H. F Hanna, W. E Itor, 1108 Hanson, J. W Harnett, C. A Harold, E. L Harper, Curzon	$1242 \\ 448 \\ , 1334 \\ 213 \\ , 1335 \\ 1240 \\ 659 \\$
Hammermann, John, Jr Hanmond, H. F Hanna, W. E Hanson, J. W Harnett, C. A Harnett, C. A Harold, E. L Harper, Curzon Harpier, G. R	$1242 \\ 448 \\ 1334 \\ 213 \\ 1335 \\ 1240 \\ 659 \\ 1241 \\$
Hammermann, John, Jr. Hanmond, H. F. Hannon, Y. E. Hanson, J. W. Harnett, C. A. Harnetter, C. Harneter, H. Harnetter, H. <	$1242 \\ 448 \\ 1334 \\ 213 \\ 1335 \\ 1240 \\ 659 \\ 1241 \\ 1165 \\ 126 \\ 1165 \\ 126 \\ 1165 $
Hammermann, John, Jr Hanmond, H. F Hanna, W. E Ilo7, 1108 Hanson, J. W Harnett, C. A Harold, E. L Harper, Curzon Harrison, G. R Harrison, H. H	$1242 \\ 448 \\ , 1334 \\ 213 \\ , 1335 \\ 1240 \\ 659 \\ 1241 \\ , 1165 \\ \end{array}$
Hammermann, John, Jr. Hanmond, H. F. Hannson, J. W. Harnett, C. A. Ili09 Harnett, C. A. Ili09 Harold, E. L. Harrison, G. R. Harrison, H. H. Ili09 Harrison, H. H. Larvard University, Albert Russel	$1242 \\ 448 \\ , 1334 \\ 213 \\ , 1335 \\ 1240 \\ 659 \\ 1241 \\ , 1165 \\ \end{array}$
Hammermann, John, Jr Hanmond, H. F Hanna, W. E 1107, 1108 Harson, J. W 1109 Harold, E. L 1109 Harold, E. L Harper, Curzon Harrison, G. R 10, 298 Harrard University, Albert Russel Erskine Bureau for Street Traffic	$1242 \\ 448 \\ , 1334 \\ 213 \\ , 1335 \\ 1240 \\ 659 \\ 1241 \\ , 1165 \\ \end{cases}$
Hammermann, John, Jr. Hanmond, H. F. Hanna, W. E. Harnett, C. A. Harnett, C. A. Harper, Curzon. Harrison, G. R. Harrison, H. H. Harrison, H. H. Barvard University, Albert Russel Erskine Bureau for Street Traffic Research	$1242 \\ 448 \\ 1334 \\ 213 \\ 1335 \\ 1240 \\ 659 \\ 1241 \\ 1165 \\ 3 399$
Hammermann, John, Jr Hanmond, H. F Hanna, W. E 1107, 1108 Harson, J. W 1109 Harold, E. L 1109 Harold, E. L Harper, Curzon Harrison, G. R 10, 298 Harvard University, Albert Russel Erskine Bureau for Street Traffic Research 2, University W 2,	$1242 \\ 448 \\ 1334 \\ 213 \\ 1335 \\ 1240 \\ 659 \\ 1241 \\ 1165 \\ 3, 399 \\ 200 \\ 0$
Hammermann, John, Jr	$1242 \\ 448 \\ , 1334 \\ 213 \\ , 1335 \\ 1240 \\ 659 \\ 1241 \\ , 1165 \\ 3, 399 \\ 660 \\ 600 \\ 1241 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ $
Hammermann, John, Jr. Hanmond, H. F. Hanna, W. E. Hanson, J. W. Harnett, C. A. Harper, Curzon. Harper, Curzon. Harrison, G. R. Harrison, H. H. Harrison, H. H. Erskine Bureau for Street Traffic Research	$1242 \\ 448 \\ 1334 \\ 213 \\ 1335 \\ 1240 \\ 659 \\ 1241 \\ 1165 \\ 3, 399 \\ 660 \\ 299 \\ 1249 \\ 1241 \\ 1241 \\ 1240 \\ 1242 \\ 1241 \\ 1240 \\ 1242 \\ 1241 \\ 1242 \\ 124$
Hammermann, John, Jr Hammond, H. F 1107, 1108 Hanson, J. W 1107, 1108 Harnett, C. A 1109 Harold, E. L Harrison, G. R 10, 208 Harvard University, Albert Russel Erskine Bureau for Street Traffic Research2, Haussmann, W2, Havstaed Ladd	$1242 \\ 448 \\ , 1334 \\ 213 \\ , 1335 \\ 1240 \\ 659 \\ 1241 \\ , 1165 \\ 3, 399 \\ 660 \\ 299 \\ 8, 661 \\ 299 \\ 100 \\ 1$
Hammermann, John, Jr. Hanmond, H. F. Hanna, W. E. Hanson, J. W. Harnett, C. A. Harper, Curzon. Harper, Curzon. Harpison, H. H. Harrison, H. H. Harrison, H. H. Harvard University, Albert Russel Erskine Bureau for Street Traffic Research. Haviland, J. T. Haystead, Ladd. 55	$\begin{array}{c} 1242\\ 448\\ ,1334\\ 213\\ ,1335\\ 1240\\ 659\\ 1241\\ ,1165\\ 3,399\\ 660\\ 299\\ 8,661\end{array}$
Hammermann, John, Jr Hanmond, H. F Hannon, J. W Hannett, C. A Harnett, C. A Harnett, C. A Harper, Curzon Harrison, G. R Harrison, H. H Erskine Bureau for Street Traffic Research Raussmann, W Haviland, J. T Haystead, Ladd Hefron, R. E	$\begin{array}{c} 1242\\ 448\\ ,1334\\ 213\\ ,1335\\ 1240\\ 659\\ 1241\\ ,1165\\ 3,399\\ 660\\ 299\\ 8,661\\ 785\end{array}$
Hammermann, John, Jr. Hanmond, H. F. Hannon, J. W. Harnett, C. A. Harrett, C. A. Harrett, C. A. Harrison, G. R. Harrison, H. H. Harrison, H. H. Erskine Bureau for Street Traffic Research. Havsmann, W. Havsmann, W. Haystead, Ladd. Helprich, H. W.	$\begin{array}{c} 1242\\ 448\\ ,1334\\ 213\\ ,1335\\ 1240\\ 659\\ 1241\\ ,1165\\ 3,399\\ 660\\ 299\\ 8,661\\ 785\\ 82\end{array}$
Hammermann, John, Jr Hanmond, H. F Hannon, W. E Hanson, J. W Harnett, C. A Harnett, C. A Harpet, Curzon Harrison, G. R Harrison, H. H Erskine Bureau for Street Traffic Research Haussmann, W Haystead, Ladd Hefron, R. E	$\begin{array}{c} 1242\\ 448\\ ,1334\\ 213\\ ,1335\\ 1240\\ 659\\ 1241\\ ,1165\\ 3,399\\ 660\\ 299\\ 8,661\\ 785\\ 214\end{array}$
Hammermann, John, Jr. Hammond, H. F. Hannon, J. W. Harnett, C. A. Harrett, C. A. Harrison, G. R. Harrison, G. R. Harrison, H. H. Harrison, H. H. Harvar, Curzon. Harrison, H. H. Harrison, H. H. Harvard University, Albert Russel Erskine Bureau for Street Traffic Research. Haussmann, W. Haviland, J. T. Haystead, Ladd. Haystead, Ladd. Heinrich, H. W. Heise, H. A. Heise, H. A.	$\begin{array}{c} 1242\\ 448\\ ,133\\ 213\\ 1240\\ 659\\ 1241\\ ,1165\\ 3,399\\ 660\\ 299\\ 8,661\\ 785\\ 32\\ 1242$
Hammermann, John, Jr. Hanmond, H. F. Hanna, W. E. Hanson, J. W. Harnett, C. A. Harper, Curzon. Harper, Curzon. Harrison, G. R. Harrison, H. H. Erskine Bureau for Street Traffic Research	$\begin{array}{c} 1242\\ 448\\ ,1335\\ 1240\\ 659\\ 1241\\ ,1165\\ 3,399\\ 660\\ 299\\ 8,661\\ 785\\ 322\\ 214\\ 1042 \end{array}$
Hammermann, John, Jr	$\begin{array}{c} 1242\\ 448\\ ,133\\ 213\\ 1240\\ 659\\ 1241\\ ,1165\\ 3,399\\ 660\\ 299\\ 8,661\\ 785\\ 322\\ 214\\ 1042\\ 138\end{array}$
Hammermann, John, Jr. Hanmond, H. F. Hanna, W. E. Hanson, J. W. Harnett, C. A. Harper, Curzon. Harper, Curzon. Harrison, G. R. Harrison, H. H. Erskine Bureau for Street Traffic Research. Research. Haviland, J. T. Haviland, J. Haviland, J.	$\begin{array}{c} 1242\\ 448\\ ,1335\\ 1240\\ 659\\ 1240\\ 659\\ 1241\\ 3,399\\ 660\\ 299\\ 8,661\\ 785\\ 322\\ 214\\ 1042\\ 1249\\ 1249\end{array}$
Hammermann, John, Jr	$\begin{array}{c} 1242\\ 448\\ ,1334\\ 213\\ ,1335\\ 1240\\ 1241\\ ,1165\\ 3,399\\ 660\\ 299\\ 8,660\\ 299\\ 8,660\\ 299\\ 1241\\ 1042\\ 1242\\ 138\\ 1242\\ 138\\ 12422\\ 1242\\ 1242\\ 1242\\ 138\\ 12422\\ 1242\\ 1242\\ 1242\\ 138\\ 12422\\ 1242\\ 1242\\ 1242\\ 138\\ 1242\\ 1$
Hammermann, John, Jr. Hanmond, H. F. Hanna, W. E. Hanson, J. W. Harnett, C. A. Il09 Haroper, Curzon Harrison, G. R. Harrison, H. H. Harrison, H. H. Teskine Bureau for Street Traffic Research Research Haystead, Ladd Hefnrich, H. W. Hednick, H. A. Haystead, Ladd Hefnich, H. W. Helenich, H. A. Hendings, H. H. Hendreson, Yandell. Henderson, Yandell.	$\begin{array}{c} 1242\\ 448\\ ,133\\ ,1335\\ 1240\\ 65241\\ ,1165\\ 3,399\\ 2299\\ 8,661\\ 785\\ 2299\\ 8,661\\ 785\\ 2214\\ 1042\\ 1242\\ 128\\ 1242\\ 128\\ 1242\\ 1166\end{array}$
Hammermann, John, Jr	$\begin{array}{c} 1242\\ 448\\ ,1334\\ 213\\ ,1335\\ 1240\\ 660\\ 299\\ 2,299\\ 8,660\\ 299\\ 8,660\\ 299\\ 8,660\\ 1241\\ 1042\\ 1242\\ 138\\ 1242\\ 138\\ 1242\\ 666\\ 688\\ 688\\ 688\\ 688\\ 688\\ 688\\ 68$
Hammermann, John, Jr. Hanmond, H. F. Hanna, W. E. Hannon, J. W. Harnett, C. A. Il09 Harrett, C. A. Harrett, C. A. Harrett, C. A. Harrison, G. R. Harrison, H. H. Il09 Harrison, H. H. Il09 Harrison, H. H. Il09 Harratt University, Albert Russel Erskine Bureau for Street Traffic Research 2, Haussmann, W. Haystead, Ladd Haystead, Ladd Heinrich, H. W. Heinrich, H. M. Heinrich, H. M. Henderson, Yandell Herber, J. L. Herber, J. L. Herber, J. L. Heastead W I	$\begin{array}{c} 1242\\ 448\\ ,1334\\ 213\\ ,1335\\ 1240\\ 659\\ 1241\\ ,1165\\ 3,399\\ 299\\ 8,661\\ 785\\ 214\\ 1042\\ 138\\ 1242\\ 138\\ 1242\\ 138\\ 1242\\ 1166\\ 88\end{array}$
Hammermann, John, Jr. Hanmond, H. F. Hanna, W. E. Hanson, J. W. Harnett, C. A. Harper, Curzon Harrison, G. R. Harrison, H. H. Harvard University, Albert Russel Erskine Bureau for Street Traffic Research 2 Haviland, J. T. Haviland, J. T. Hefron, R. E. Hefron, R. H. Helenrich, H. W. Helenrich, H. Q. Hedreson, Yandell. Henzler, A. O. Herber, J. L. Herber, W. J.	$\begin{array}{c} 1242\\ 448\\ , 1334\\ , 1335\\ 1240\\ 659\\ 1241\\ , 1165\\ 3, 396\\ 299\\ 8, 685\\ 732\\ 214\\ 1042\\ 1242\\ 138\\ 1242\\ 168\\ 68\\ 1336\\ \end{array}$
Hammermann, John, Jr. Hanmond, H. F. Hannon, J. W. Hanneon, J. W. Harnett, C. A. Ili09 Harretr, C. A. Harretr, Curzon. Harrison, G. R. Harrison, H. H. Harrison, H. H. Ili09 Harrison, H. H. Harrison, H. H. Yatison, H. H. Harvard University, Albert Russel Erskine Bureau for Street Traffic Research Yatland, J. T. Haystead, Ladd Haystead, Ladd Heise, H. A. Heinrich, H. W. Heise, H. A. Henderson, Yandell Henderson, Yandell Herber, J. L. Hess, C. N. Heyting, W. J. Hibbs, Ben.	$\begin{array}{c} 1242\\ 448\\ ,1334\\ ,213\\ ,1335\\ 1240\\ 659\\ 1241\\ ,1165\\ 3,396\\ 299\\ 8,661\\ 7852\\ 214\\ 1042\\ 1382\\ 1242\\ 1166\\ 138\\ 1243\end{array}$
Hammormann, John, Jr	$\begin{array}{r} 1242\\ 448\\ , 213\\ , 1334\\ , 1235\\ 1240\\ 659\\ 1241\\ , 1165\\ 3, 399\\ 299\\ 8, 660\\ 299\\ 8, 661\\ 785\\ 2144\\ 1042\\ 1188\\ 1242\\ 1166\\ 1243\\ 885\\ 885\\ 885\\ 885\\ 885\\ 885\\ 885\\ 88$
Hammermann, John, Jr	$\begin{array}{c} 1242\\ 1244\\ 1334\\ 2135\\ 1335\\ 1240\\ 659\\ 1241\\ 1165\\ 3, 399\\ 299\\ 8, 660\\ 299\\ 8, 660\\ 299\\ 2144\\ 1042\\ 1382\\ 1243\\ 1243\\ 1243\\ 8854\\ 1243\\ 1243\\ 8854\\ 1243\\ 1244\\ 1243\\ 1243\\ 1243\\ 1244\\ 1243\\ 1244\\ 1243\\ 1244\\ 1243\\ 1244\\ 1243\\ 1244\\ 1243\\ 1244\\ 1243\\ 1244\\ 1243\\ 1244\\ 1243\\ 1244\\ 1243\\ 1244\\ 1244\\ 1244\\ 1243\\ 1244$ 124
Hammermann, John, Jr. Hanmond, H. F. Hannon, W. E. Hanson, J. W. Hanson, J. W. Harnett, C. A. Harper, Curzon Harrison, G. R. Harrison, H. H. Harrison, H. H. Erskine Bureau for Street Traffic Research Haviland, J. T. Haviland, J. T. Haviland, J. T. Haviland, J. T. Hedron, R. E. Henrich, H. W. Helenrich, H. M. Helenrich, H. O. Heinrich, H. O. Henzler, A. O. Herber, J. L. Heess, C. N. Heyting, W. J. Hilbos, Ben. Hill, C. E. Hill, C. S.	$\begin{array}{c} 1242\\ 1248\\ 1334\\ 2135\\ 1240\\ 6659\\ 12461\\ 1165\\ 999\\ 2099\\ 8,661\\ 3,3960\\ 2099\\ 8,661\\ 1242\\ 1166\\ 1242\\ 1168\\ 1336\\ 1242\\ 1336\\ 785\\ 785\\ 214\\ 1042\\ 1268\\ 1242\\ 168\\ 1242\\ 1366\\ 785\\ 785\\ 785\\ 785\\ 785\\ 785\\ 785\\ 785$
Hammermann, John, Jr	$\begin{array}{c} 1242\\ 448\\ 213\\ 1334\\ 213\\ 124\\ 652\\ 1241\\ 652\\ 1241\\ 1241\\ 3,399\\ 660\\ 299\\ 299\\ 660\\ 785\\ 32\\ 298\\ 1241\\ 1042\\ 138\\ 1242\\ 138\\ 1242\\ 138\\ 853\\ 786\\ 68\\ 1243\\ 885\\ 786\\ 787\\ 787\\ 787\\ 787\\ 787\\ 787\\ 787$
Hammermann, John, Jr	$\begin{array}{c} 1242\\ 448\\ 213\\ 213\\ 213\\ 213\\ 1240\\ 655\\ 1241\\ 141\\ 1165\\ 3, 399\\ 6666\\ 299\\ 8, 661\\ 785\\ 322\\ 214\\ 1042\\ 299\\ 8, 661\\ 785\\ 322\\ 138\\ 1242\\ 138\\ 1242\\ 138\\ 1242\\ 138\\ 1242\\ 138\\ 1242\\ 138\\ 68\\ 98\\ 1242\\ 166\\ 68\\ 1243\\ 138\\ 68\\ 1242\\ 166\\ 68\\ 1243\\ 166\\ 68\\ 1243\\ 166\\ 68\\ 1243\\ 166\\ 68\\ 1243\\ 188\\ 188\\ 188\\ 188\\ 188\\ 188\\ 188\\ 18$
Hammermann, John, Jr. Hannna, W. E. Hannond, H. F. Hannon, J. W. Harnett, C. A. Harper, Curzon Harrison, G. R. Harrison, H. H. Harrison, H. H. Harverd University, Albert Russel Erskine Bureau for Street Traffic Research 2, Haviland, J. T. Haystead, Ladd 55 Hefron, R. E. 10 Heinrich, H. W. 56 Hedroson, Yandell 57 Heenzler, A. O. 10 Heyting, W. J. 10 Heinrich, H. W. 10 Heinrich, H. W. 10 Heinrich, H. W. 10 Henderson, Yandell 10 Henzer, A. O. 10 Heyting, W. J. 10 Hill, C. S. 10 Hill, C. S. 10 Hill, C. S. 10 Hill, W. O. 66 Hoara, A. F. 66	$\begin{array}{c} 1242\\ 448\\ ,1334\\ ,1335\\ ,1355\\ 1240\\ 655\\ 1241\\ ,1165\\ 33,309\\ 660\\ 660\\ 660\\ 299\\ 8,661\\ 785\\ 322\\ 214\\ 1042\\ 219\\ 88,661\\ 1242\\ 1165\\ 88,661\\ 1242\\ 1165\\ 88,661\\ 1242\\ 1242\\ 1165\\ 785\\ 786\\ 787\\ 787\\ 787\\ 787\\ 787\\ 787\\ 787$
Hammermann, John, Jr. Hanmond, H. F. Hannon, W. E. Hannon, W. E. Hannon, W. E. Harnett, C. A. Harper, Curzon Harrison, G. R. Harrison, H. H. Harrison, H. H. Topic Harystench Harster Haviland, J. T. Haystead, Ladd Heatherson, Yandell Henderson, Yandell Herber, J. L. Hesting, W. J. Hilbs, Ben Hill, C. E. Hill, W. O. Hill, W. O. Hill, W. O.	$\begin{array}{c} 1242\\ 448\\ ,1334\\ 4213\\ ,1335\\ 1240\\ 655\\ 290\\ 8,661\\ 1042\\ 1244\\ ,1165\\ 32290\\ 8,661\\ 1042\\ 214\\ 1166\\ 688\\ 1042\\ 226\\ 1336\\ 1243\\ 3855\\ 22,663\\ 22,663\\ 1232\\ 22,663\\ 1232\\ 1336\\ 1243\\ 1336\\ 1336\\ 1243\\ 1336\\ 1366\\ 1336\\$
Hammermann, John, Jr. Hannna, W. E. Hannond, H. F. Hannon, J. W. Harnett, C. A. Harper, Curzon Harrison, G. R. Harrison, H. H. Harvard University, Albert Russel Erskine Bureau for Street Traffic Research 2 Haviland, J. T. Haystead, Ladd 55 Hefron, R. E. Henrich, H. W. Helnrich, H. W. Helenrich, H. W. Hedreson, Yandell Herber, J. L. Heybs, Ben Hill, C. S.	$\begin{array}{c} 1242\\ 448\\ ,1334\\ ,1335\\ ,1335\\ 1240\\ 6552\\ 1241\\ ,1165\\ 33,309\\ 660\\ 660\\ 2999\\ 8,661\\ 1042\\ 214\\ 11062\\ 299\\ 133\\ 661\\ 1042\\ 1133\\ 685\\ 785\\ 786\\ 68\\ 133\\ 685\\ 786\\ 664\\ 664\\ 664\\ 664\\ 1243\\ 787\\ 787\\ 787\\ 786\\ 664\\ 664\\ 664\\ 664\\ 664\\ 1243\\ 138\\ 1242\\ 138\\ 138\\ 138\\ 138\\ 138\\ 138\\ 138\\ 138$
Hammermann, John, Jr. Hanmond, H. F. Hannon, J. W. Hannon, J. W. Harnett, C. A. Harrett, C. Marrett, A. Haussmann, W. Haystead, Ladd Haystead, Ladd Haystead, Ladd Heise, H. A. Heinrich, H. W. Heinrich, H. W. Heinrich, H. W. Herber, J. L. Heese, C. N. Hilbs, Ben Hill, C. E. Hill, C. S. Hill, W. O. Hill, W. O. Hill, W. O. Hoare, A. E. Hodgr	$\begin{array}{c} 1242\\ 448\\ ,1334\\ 4213\\ ,1355\\ 1240\\ 655\\ 290\\ 3,309\\ 666\\ 290\\ 929\\ 290\\ 8,661\\ 1241\\ 1165\\ 8,20\\ 1042\\ 138\\ 855\\ 1242\\ 138\\ 855\\ 2,2663\\ 139\\ 664\\ 885\\ 2,2663\\ 139\\ 664\\ 800\\ 1243\\ 139\\ 614\\ 885\\ 1242\\ 138\\ 855\\ 1243\\ 138\\ 855\\ 1243\\ 138\\ 855\\ 1243\\ 138\\ 855\\ 1243\\ 138\\ 855\\ 1243\\ 138\\ 855\\ 1243\\ 138\\ 855\\ 138\\ 138\\ 138\\ 138\\ 138\\ 138\\ 138\\ 138$
Hammermann, John, Jr. Hanmond, H. F. Hannon, W. E. Hanson, J. W. Hanson, J. W. Harnett, C. A. Harper, Curzon Harrison, G. R. Harrison, H. H. Harrison, H. H. Erskine Bureau for Street Traffic Research Haviland, J. T. Haystead, Ladd Hefron, R. E. Henrich, H. W. Henrich, H. A. Heinrich, H. M. Heinrich, H. O. Heinrich, H. S. Henzer, A. O. Henzler, A. O. Herber, J. L. Hess, C. N. Heydig, W. J. Hill, C. S. Hill, C. S. Hill, W. O. Hill, C. A. Hodges, C. E., Jr. Hodges, C. H. G.	$\begin{array}{c} 1242\\ 448\\ ,1334\\ 448\\ ,1337\\ 1246\\ 655\\ 1246\\ 655\\ 1246\\ 1241\\ 1165\\ 3,399\\ 666\\ 8,661\\ 1243\\ 1241\\ 1042\\ 299\\ 299\\ 214\\ 1062\\ 8,661\\ 1243\\ 138\\ 855\\ 786\\ 787\\ 787\\ 787\\ 8664\\ 300\\ 900\\ 900\\ 900\\ 900\\ 900\\ 900\\ 900$
Hammermann, John, Jr. Hannna, W. E. Hannon, J. W. Hanson, J. W. Harnett, C. A. Harper, Curzon Harrison, G. R. Harrison, H. H. Harvard University, Albert Russel Erskine Bureau for Street Traffic Research 2, Haviland, J. T. Haviland, J. T. Haviland, J. T. Hedron, R. E. Heinch, H. W. Heise, H. A. Heise, H. A. Henderson, Yandell Henzer, J. L. Hebs, Ben Hebs, Ben Hill, C. E. Hill, C. E. Hill, C. E. Hill, C. S. Hinkle, A. H. Hodges, C	$\begin{array}{c} 1242\\ 448\\ ,1334\\ 448\\ ,1335\\ 1246\\ 655\\ 1241\\ ,1165\\ 3,309\\ 660\\ 299\\ 299\\ 298\\ 8,661\\ 785\\ 322\\ 138\\ 1242\\ 1166\\ 68\\ 8,661\\ 1243\\ 1336\\ 68\\ 1243\\ 1336\\ 68\\ 1243\\ 1326\\ 68\\ 1243\\ 300\\ 69,9\\ 664\\ 300\\ 69,9\\ \end{array}$
Hammermann, John, Jr. Hanmond, H. F. Hanna, W. E. Hanson, J. W. Hanson, J. W. Harnett, C. A. Harper, Curzon Harrison, G. R. Harrison, H. H. Farrison, H. H. Harvard University, Albert Russel Erskine Bureau for Street Traffic Research Haystead, Ladd Haystead, Ladd Hefnrich, H. W. Henderson, Yandell Herber, J. L. Heberg, M. J. Henderson, Yandell Herber, J. Hebs, Ben Hill, C. S. Hill, C. S. Hill, W. O. Hill, W. O. Hill, W. G. Hill, W. O. Hill, W. O. Hill, C. S. Hodges, C. E., Jr. Hoffman, H. G. 234, 301, 302, 449.66	$\begin{array}{c} 1242\\ 448\\ +1834\\ -213\\$
Hammermann, John, Jr. Hanmond, H. F. Hanna, W. E. Hannond, H. F. Hanson, J. W. Harnett, C. A. Harper, Curzon Harrison, G. R. Harrison, H. H. Harrison, H. H. Harvard University, Albert Russel Erskine Bureau for Street Traffic Research 2 Haviland, J. T. Haystead, Ladd 55 Hefron, R. E. 54 Heinrich, H. W. Heenderson, Yandell Henzler, A. O. Herber, J. L. Hebs, C. N. Heinke, A. H. Hill, C. E. Hill, C. S. Hill, C. E. Hill, C. S. Hilke, A. H. Hodges, C. E., Jr. Hoffman, H. G. Hoffman, P. G. 234, 301, 302, 449, 661	$\begin{array}{c} 1242\\ 448\\ +1334\\ 448\\ +1334\\ +1335\\ 1241\\ -165\\ 3, 309\\ 666\\ 299\\ 8, 661\\ -29\\ 8, 661\\ -29\\ 214\\ 1241\\ 1042\\ -29\\ 299\\ -22\\ -22\\ -22\\ -22\\ -22\\ -2$
Hammermann, John, Jr. Hanmond, H. F. Hannon, J. W. Hannon, J. W. Hanner, C. A. Harnett, C. A. Harper, Curzon Harrison, G. R. Harrison, H. H. Harrison, H. H. Topic Curzon Harrison, G. R. Harrison, H. H. Topic Curzon Harvard University, Albert Russel Erskine Bureau for Street Traffic Research Research Haviland, J. T. Haystead, Ladd Haystead, Ladd Henderson, Yandell Henderson, Yandell Herber, J. L. Heston, Yundell Heyting, W. J. Hilbs, Ben Hill, C. S. Hill, W. O. Hill, W. O. Hofgres, C. E., Jr. Hoffman, H. G	$\begin{array}{c} 1242\\ 448\\ +1834\\ -213\\$
Hammermann, John, Jr. Hanmond, H. F. Hanna, W. E. Hannond, H. F. Hannon, J. W. Harnett, C. A. Harper, Curzon Harrison, G. R. Harrison, H. H. Harrison, H. H. Erskine Bureau for Street Traffic Research Paystead, Ladd Harvison, Yandell Heinrich, H. W. Henger, Nadell Henger, J. L. Herber, J. L. Heybs, Ben Hill, C. E. Hill, C. E. Hill, C. S. Hill, C. S. Hill, C. S. Hodges, C. E., Jr. Hoffman, H. G. 234, 301, 302, 449, 666 Hoffman, Reyburn Hogue, R. W., Jr.	$\begin{array}{c} 1242\\ 448\\ +1834\\ -213\\ 213\\ -1834\\ -1844\\ -$
Hammermann, John, Jr. Hanmond, H. F. Hannon, W. E. Hanson, J. W. Harner, C. A. Harper, Curzon Harrison, G. R. Harrison, H. H. Harrison, H. H. Lrskine Bureau for Street Traffic Research Raystead, Ladd Harler, A. Heinrich, H. W. Heise, H. A. Hederson, Yandell Henzer, J. L. Heber, J. L. Heibse, Ben Hilbs, Ben Hilb, C. E. Hilbs, Ben Hill, C. E. Hill, C. E. Hilb, C. E. Hilb, C. E. Hill, C. E. Hill, C. E. Hill, C. E. Hill, C. S. Hill, C. S. Hill, C. S. Hoare, A. E. Hoare, A. E. Hoffman, P. G. 234, 301, 302, 449, 661 Hoffman, R. W. Jr. Hodge, R. W., Jr. Hoke, Travis.	$\begin{array}{c} 1242\\ 448\\ +1334\\ 213\\ 213\\ 1241\\ -655\\ -655\\ -655\\ -655\\ -655\\ -2141\\ -755\\ -655\\ -2141\\ -755\\ -226\\ -655\\ -221\\ -214\\ -226\\ -226\\ -226\\ -226\\ -226\\ -226\\ -226\\ -226\\ -226\\ -266\\$
Hammermann, John, Jr. Hanmond, H. F. Hanna, W. E. Hannond, H. F. Hanson, J. W. Harnett, C. A. Harper, Curzon Harrison, G. R. Harrison, H. H. Harrison, H. H. Erskine Bureau for Street Traffic Research Haystead, Ladd Haystead, Ladd Hefnron, R. E. Henger, A. O. Henger, J. L. Heenzler, A. O. Hill, C. E. Hill, C. S. Hill, R. A. Gast, Sol, Sol, Sol, Sol, 45 Hodges, C. E., Jr. Hoffman, H. G. Sol, 43 Hogue, R. W., Jr. Sol, 45 Hodges, Leeburn Holdes Revburn Sol, 45	$\begin{array}{c} 1242\\ 448\\ +1834\\ -213\\ -213\\ -213\\ -213\\ -213\\ -213\\ -2141\\ -33\\ -33\\ -290\\ -290\\ -290\\ -290\\ -290\\ -290\\ -290\\ -200\\ $
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Hammermann, John, Jr	$\begin{array}{c} 1242\\ 448\\ +48\\ +334\\ -213\\ -$
Hammermann, John, Jr. Hanmond, H. F. Hanna, W. E. Hannond, H. F. Hannon, J. W. Harnett, C. A. Harper, Curzon Harrison, G. R. Harrison, H. H. Harstead. Harstead. Haystead. Hadd Hefron, R. E. Heinrich, H. W. Heenderson, Yandell Henzer, A. O. Herber, J. L. Herber, M. A. Heying, W. J. Hill, C. E. Hill, C. S. Hoffman, H. G. Hodges, C. E., Jr.	$\begin{array}{c} 1242\\ 1243\\ 448\\ ,1337\\ 1246\\ 655\\ 1246\\ 655\\ 1241\\ ,1165\\ 33\\ 399\\ 666\\ 666\\ 299\\ 299\\ 299\\ 299\\ 299\\ 2$
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Hammermann, John, Jr. Hanmond, H. F. Hannoa, W. E. Hannoa, W. E. Hannoa, W. E. Hanson, J. W. Harnett, C. A. Harper, Curzon Harrison, G. R. Harrison, H. H. Tarrison, H. H. Erskine Bureau for Street Traffic Research Haviland, J. T. Haystead, Ladd Haystead, Ladd Hefnron, R. E. Hennich, H. W. Heinrich, H. W. Heinrich, H. W. Henger, A. O. Herber, J. L. Heying, W. J. Hilbs, Ben Hill, C. E. Hill, C. S. Hill, C. S. Hill, C. S. Hoffman, H. G. Hoffman, P. G. 234, 301, 302, 449, 666 Hoffman, P. G. Hoffman, Reyburn S03, 45 Hogue, R. W., Jr. Holders, D. H. Hoffman, L. G. 86 Holleran, L. G. 86 Holmes, E. H. Holeres, S. J.	$\begin{array}{c} 1242\\ 448\\ +1834\\ +213\\ 213\\ 124\\ -655\\ 1244\\ -655\\ 1241\\ -655\\ 1241\\ -655\\ 1241\\ -655\\ -269\\ -$
Hammermann, John, Jr. Hannna, W. E. Hannon, J. W. Hanson, J. W. Harnett, C. A. Harper, Curzon Harrison, G. R. Harrison, H. H. Harsion, H. H. Harsion, H. H. Harsion, H. H. Haviland, J. T. Haylead, J. T. Haystead, Ladd Heise, H. A. Heinch, H. W. Hederson, Yandell Henzer, J. L. Hebs, Ben Hebs, Ben Hill, C. E. Hill, C. E. Hill, W. O. Hill, C. E. Hill, C. E. Hodges, C. E., Jr. Hodges, C. E., Jr. Hoffman, H. G. Hoffman, P. G. 234, 301, 302, 449, 666 Hoffman, P. G. Hoke, Travis.	$\begin{array}{c} 1242\\ 448\\ +1834\\ +1834\\ +1834\\ +1835\\ 1246\\ -655\\ 1246\\ -655\\ 1241\\ -785\\ -846\\ -846\\ -785\\ -785\\ -846\\ -785\\ -7$
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Hammermann, John, Jr. Hanmond, H. F. Hannon, W. E. Hannon, J. W. Hanson, J. W. Harnett, C. A. Harper, Curzon Harrison, G. R. Harrison, H. H. Harstead, Ladd Haystead, Ladd Heinrich, H. W. Heinrich, H. W. Heenderson, Yandell Henderson, Yandell Heenzler, A. O. Heyting, W. J. Hilb, Seen Hill, C. E. Hill, C. S. Hill, C. S. Hofman, H. G. Hodges, C. E., Jr. Hoffman, H. G. Hoffman, H. G. Hoffman, H. G. Holdez, Sett. Holdez, B. H. Holdez, B. H. Holdez, B. H. Holdez, B. H. Hoffman, L. G. Holdez, B. H.	$\begin{array}{c} 1242\\ 1243\\ 448\\ 448\\ 1337\\ 1246\\ 655\\ 1246\\ 655\\ 1246\\ 655\\ 1241\\ 136\\ 85\\ 1242\\ 1145\\ 755\\ 32\\ 214\\ 138\\ 855\\ 785\\ 785\\ 785\\ 785\\ 785\\ 785\\ 78$
Hammermann, John, Jr	$\begin{array}{c} 1242\\ 448\\ +1834\\ +213\\ +384\\ +1834\\ +1834\\ +1834\\ +1834\\ +1834\\ +1834\\ +1834\\ +1834\\ +1834\\ +1844\\ $

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Kaliski, David Kansas State Board of Health Kansas Legislative Council, Research	$1250 \\ 1112 \\ 562$
Jones, Spencer Kaliski, David Kansas State Board of Health Kansas Legislative Council, Research Department	$1250 \\ 1112 \\ 562 \\ 1046 \\ 1047 \\ 1$
Kaliski, David Kaliski, David Kansas State Board of Health Kansas Legislative Council, Research Department Keller, A. W	$ \begin{array}{r} 1250 \\ 1112 \\ 562 \\ 1046 \\ 1047 \\ 306 \\ \end{array} $
Kaliski, David Kaliski, David Kansas State Board of Health Kansas Legislative Council, Research Department Keller, A. W Kelsey, H. N Kemper, J. S	$1250 \\ 1112 \\ 562 \\ 1046 \\ 1047 \\ 306 \\ 307 \\ $
Kaliski, David Kaliski, David Kansas State Board of Health Kansas Legislative Council, Research Department Keller, A. W Kelsey, H. N Kemper, J. S Kenner, Summer	$1250 \\ 1112 \\ 562 \\ 1046 \\ 1047 \\ 306 \\ 307 \\ 1341 \\ 134$
Jones, Spencer Kaliski, David Kansas State Board of Health Legislative Council, Research Department Keller, A. W Kelsey, H. N Kemper, J. S Kenner, Sumner Kenner, Sumner	$1250 \\ 1112 \\ 562 \\ 1046 \\ 1047 \\ 306 \\ 307 \\ 1341 \\ 73, 74$
Jones, Spencer Kaliski, David Kansas State Board of Health Kansas Legislative Council, Research Department Keller, A. W Kemper, J. S Kenner, Sumner Kerlee, C. E Ketrey, C. F Ketrey, C. F	$1250 \\ 1112 \\ 562 \\ 1046 \\ 1047 \\ 306 \\ 307 \\ 1341 \\ 73, 74 \\ 144 \\ 3564 \\ 364 \\ 364 \\ 364 \\ 366 \\ 364 \\ 366 \\ 3$
Jones, Spencer Kaliski, David Kansas State Board of Health Kansas Legislative Council, Research Department Keller, A. W Kelsey, H. N. Kemper, J. S. Kenner, Sumner Kerlee, C. E Kettering, C. F Killick, V. W	$1250 \\ 1112 \\ 562 \\ 1046 \\ 1047 \\ 306 \\ 307 \\ 1341 \\ 73, 74 \\ 144 \\ 3, 564 \\ 1235 \\ 1235 \\ 125$
Jones, Spencer Kaliski, David Kansas State Board of Health Kansas Legislative Council, Research Department Keller, A. W Kenser, H. N Kenner, J. S Kenner, Sumner Kerner, C. E Kettering, C. F Killick, V. W	$\begin{array}{c} 1250\\ 1112\\ 562\\ 1046\\ 1047\\ 306\\ 307\\ 1341\\ 73, 74\\ 144\\ 3, 564\\ 1235\\ 236\\ \end{array}$
Jones, Spencer Kaliski, David Kansas State Board of Health Department Keller, A. W Kenser, H. N Kenner, J. S Kerlee, C. E Kerlee, C. F Ketring, C. F Killick, V. W Killick, V. W King, J. D King, F. G. W Kingery, Robert	$\begin{array}{c} 1250\\ 1112\\ 562\\ 1046\\ 1047\\ 306\\ 307\\ 1341\\ 73, 74\\ 1235\\ 236\\ 836\\ 186\\ 186\\ 186\\ 186\\ 186\\ 186\\ 186\\ 18$
Jones, Spencer Kaliski, David Kansas State Board of Health Kansas Legislative Council, Research Department Kelsey, H. N Kemper, J. S Kenner, Sumner Kerlee, C. E Ketlee, C. F Ketreing, C. F Killick, V. W	$\begin{array}{c} 1250\\ 1112\\ 562\\ 1046\\ 1047\\ 306\\ 307\\ 1341\\ 1341\\ 1235\\ 236\\ 836\\ 1251\\ 672\\ \end{array}$
Jones, Spencer Kaliski, David Kansas State Board of Health Kansas Legislative Council, Research Department Keller, A. W Kemper, J. S Kenner, Sumner Kerlee, C. E Ketre, C. E Kettering, C. F Killick, V. W	$\begin{array}{c} 1250\\ 1112\\ 562\\ 1046\\ 1047\\ 306\\ 307\\ 1341\\ 73, 74\\ 144\\ 1235\\ 236\\ 836\\ 1251\\ 672\\ 9, 145\\ \end{array}$
Jones, Spencer Kaliski, David Kansas State Board of Health Kansas Legislative Council, Research Department Keller, A. W Kenner, J. S Kenner, Sumner Kerner, Sumner Kerner, C. E Kettering, C. F Killick, V. W King, F. G. W Kingery, Robert Kingery, Robert Kinzer, J. P Kinzer, J. P Kinzer, J. P Kirky, W. F	$\begin{array}{c} 1250\\ 1112\\ 562\\ 1046\\ 1047\\ 306\\ 307\\ 1341\\ 73, 74\\ 144\\ 235\\ 236\\ 836\\ 1251\\ 672\\ 9, 145\\ 673\\ \end{array}$
Jones, Spencer Kaliski, David Kansas State Board of Health Department Keller, A. W Kenser, H. N Kenner, J. S Kerlee, C. E Kettering, C. F Killick, V. W King, J. D King, F. G. W Kingery, Robert Kingery, Robert Kingery, Robert Kinzer, J. P Kirby, R. S Kirz, J. P Kirby, R. S Kirk, W. F Kirk, W. F Kirk, W. S Kirk, S. M. S Kirk, S Kirk	$\begin{array}{c} 1250\\ 1112\\ 562\\ 1046\\ 1047\\ 306\\ 307\\ 1341\\ 1235\\ 236\\ 836\\ 1251\\ 672\\ 9, 145\\ 672\\ 9, 145\\ 672\\ 9, 145\\ 672\\ 9, 146\\ 836\\ 672\\ 9, 146\\ 836\\ 672\\ 9, 146\\ 836\\ 672\\ 9, 146\\ 836\\ 836\\ 836\\ 836\\ 836\\ 836\\ 836\\ 83$
Jones, Spencer Kaliski, David Kansas State Board of Health Department Keller, A. W Kenper, J. S Kenner, Sumner Kerlee, C. E Kerlee, C. E Kerlee, C. F Killick, V. W King, J. D King, J. D King, F. G. W Kingery, Robert Kinney, D. F Kinzer, J. P Kinzer, J. P Kirkby, R. S Kirkby, R. S Kirkby, R. S Kirkby, B. S Kirkby, S Kirkby, B. S	$\begin{array}{c} 1250\\ 1112\\ 562\\ 0.000\\ 1046\\ 307\\ 1341\\ 73, 74\\ 1235\\ 2366\\ 1251\\ 672\\ 9, 145\\ 672\\ 9, 146\\ 8309\\ 76\\ 673\\ 146\\ 8, 309\\ 76\end{array}$
Jones, Spencer Kaliski, David Kansas State Board of Health Kansas Legislative Council, Research Department Keller, A. W. Kemper, J. S. Kenner, Sumner Kerner, Sumner Kerner, C. E. Kilick, V. W. Kettering, C. F. Kilick, V. W. King, F. G. King, F. G. Kingery, Robert Kingery, Robert Kingery, Robert Kinzer, J. P. Kinzer, J. P. Kinzer, J. P. Kinzer, J. P. Kirkbride, B. H. Kirk, W. F. Kichi, Julius	$\begin{array}{c} 1250\\ 1112\\ 562\\ 1046\\ 1047\\ 306\\ 307\\ 1341\\ 73,74\\ 144\\ 1235\\ 236\\ 836\\ 1251\\ 672\\ 9,145\\ 9,145\\ $
Jones, Spencer Kaliski, David Kansas State Board of Health Kansas Legislative Council, Research Department Kelsey, H. N Kemper, J. S Kenner, Sumner Kerlee, C. E Kettering, C. F Killick, V. W Killick, V. W King, F. G. W Kingery, Robert Kingery, Robert Kingery, Robert Kinzer, J. P Kinzer, J. P Kirk, W. F	$\begin{array}{c} 1250\\ 1112\\ 562\\ 1046\\ 1047\\ 306\\ 307\\ 1341\\ 73,74\\ 1235\\ 836\\ 1251\\ 673\\ 144\\ 8,564\\ 836\\ 836\\ 1251\\ 673\\ 146\\ 8,309\\ 76\\ 237\\ 1342\\ \end{array}$
Jones, Spencer Kaliski, David Kansas State Board of Health Department Keller, A. W Kenser, K. W Kenner, J. S Kerlee, C. E Kertering, C. F Killick, V. W King, F. G. W King, F. G. W Kingery, Robert Kingery, Robert Kingery, Robert Kingery, Robert Kingery, Robert Kinger, J. P Kirby, R. S Kinzer, J. P Kirby, R. S Kirk, W. F Kirkbride, B. H Kirkbride, B.	$\begin{array}{c} 1250\\ 1112\\ 562\\ 1046\\ 1047\\ 306\\ 307\\ 1341\\ 73, 74\\ 1235\\ 236\\ 836\\ 1251\\ 672\\ 9, 145\\ 836\\ 1251\\ 672\\ 9, 146\\ 8, 309\\ 672\\ 1342\\ 237\\ 1342\\ 1113\\ 302\\ 1342\\ 113\\ 302\\ 1342\\ 113\\ 302\\ 1342\\ 113\\ 302\\ 1342\\ 113\\ 302\\ 1342\\ 113\\ 302\\ 1342\\ 113\\ 302\\ 1342\\ 113\\ 302\\ 1342\\ 113\\ 302\\ 1342\\ 1342\\ 113\\ 302\\ 1342\\ 13$
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Jones, Spencer Kaliski, David Kansas State Board of Health Kansas Legislative Council, Research Department Keller, A. W Kemper, J. S Kenner, Sumner Kerner, Sumner Kertering, C. F Killick, V. W King, F. G. W Kingery, Robert	$\begin{array}{c} 1250\\ 11122\\ 562\\ 1046\\ 1047\\ 306\\ 307\\ 1341\\ 73, 74\\ 1236\\ 836\\ 1251\\ 672\\ 9, 145\\ 672\\ 9, 145\\ 672\\ 237\\ 1342\\ 1113\\ 837\\ 0, 510\\ 890 \end{array}$
Jones, Spencer Kaliski, David Kansas State Board of Health Department Keller, A. W Kenner, J. S Kenner, Sumner Kerlee, C. E Kettering, C. F Killick, V. W King, F. G. W Kingery, Robert Kingery, Robert Kingery, Robert Kingery, Robert Kinger, J. P Kinzer, J. P Kinzer, J. P Kinzer, J. P Kinzer, J. M Kinzer, J. C Kinzer,	$\begin{array}{c} 1250\\ 11122\\ 562\\ 1046\\ 1047\\ 3067\\ 1341\\ 73,74\\ 43,5645\\ 1251\\ 6145\\ 2366\\ 1251\\ 6145\\ 8309\\ 76\\ 237\\ 1342\\ 1113\\ 837\\ 1342\\ 1113\\ 837\\ 0,510\\ 830\\ 0, 1344 \end{array}$
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Jones, Spencer Kaliski, David Kansas State Board of Health Kansas Legislative Council, Research Department Keller, A. W Kemper, J. S Kenner, Sumner Kerlee, C. E Killick, V. W King, F. G. W Kingery, Robert Kingery, Robert	$\begin{array}{c} 12500\\ 11112\\ 562\\ 562\\ 1046\\ 1047\\ 1046\\ 307\\ 1341\\ 1236\\ 235\\ 235\\ 235\\ 1251\\ 146\\ 8366\\ 8366\\ 8366\\ 8366\\ 8366\\ 8366\\ 8368\\ 8369\\ 766\\ 237\\ 1342\\ 147\\ 342\\ 1311\\ 148\\ 847\\ 177, 177, 177\\ 177\\ 177\\ 177\\ 177\\ 17$
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